Co-operation in California

Sane Business Methods Adopted.

Developing the Local and Overseas Markets.

MUCH HAS BEEN said and written about co-operation amongst fruitgrowers in California, but as oftentimes major points are overlooked, and minor points magnified, we have obtained expressions of opinion from capable Australian men who have studied conditions in U.S.A.

Mr. Sydney Stott, a well-known and successful Melbourne business man, who is also a large orchardist, writes:

"When conditions were bad in California and growers were "flat broke," they studied the situation, got together in co-operative groups, designed a contract binding the grower to sell through his organisation. Orchardists then made land selling in 1893 at £20 to £30 per acre sell to-day for £400 and even £500 per acre for Oranges, and similar though somewhat smaller amounts for Apples. They learned how to co-operate correctly, and they now handle on a co-operative basis millions of pounds' worth of products each year.

A large proportion of the **deciduous summer fruits** is sold f.o.b. railway station at the point of production, or for cash at auction. Among the Apple associations it is a common practice to send the agents in advance of the harvest a catalogue of the probable number of cases of the different varieties and sizes of the higher grade of fruit that the Association has for sale, and finally to sell the fruit to the highest bidder. The lower grades are consigned or sold for cash in local markets.

The co-operative method properly handled has brought about large economies in the purchase of supplies, in the cost of preparing the fruit for shipment, and in the charges for distribution and sale. It has sometimes doubled the net returns to the individual grower for his product.

The first thing that growers do is **to grade, raise the quality, standardise and brand their produce.**

The second step is **packing,** and that is just as important as grading.

The third step is **marketing and extending the market by advertising, get the ear of the consumer.**

There is a real market in the country where the fruit is produced, and people will eat more Apples or more Oranges as the case may be if the local markets are exploited.

Another step in marketing is to see that every market gets what it can take at a fair price. At present no one advises Australians as to what each town in England or Scotland can take, but Americans know all about it, and act accordingly. The American Co-operative Associations do not dump their fruit on the English market, as do Australians. They know by previous enquiry just what London is likely to take, and what Southampton, Liverpool, Hull, Glasgow and other towns are likely to take. The price is dependent on the supply at point of consumption instead of the supply at the point of production.

The Californian Fruit Exchange (Citrus) sells part of its fruit on its own account, and also through agents. There is very little difference in the methods of purchasing fruit by retail shopkeepers in Sydney, Melbourne or San Francisco.

There is this difference, however, not only do fruiterers sell fruit in shops in America, as here, but every grocery store sells Apples.

Thus the housewife, when ordering her sugar or tea, orders also Apples or Oranges by the case or the dozen. Apples are not sold by the pound, but singly, by the dozen or by the case, and in a much more attractive form than in Australia. The rate of commission paid to agents is ten per cent., but the American agents extend and find new markets to the best of their ability, and are the assistants of the producers not their masters.

My opinion of the Californian system of organising the production and distribution of fruit is that it has made that country one of the most prosperous on the face of the earth.

If something similar were adopted in Australia, and if growers would co-operate in the same businesslike manner, and not in the slipshod manner in which so-called Co-operative Associations have been conducted here in the past, it would bring prosperity to all concerned, and fruitgrowing would be remunerative.

Some people believe that co-operation means the elimination of commission merchants, but this is far from being the case. Once a year the co-operative growers of the North-West of America are the hosts of numerous representatives of the New York and London commission merchants at a public banquet and a round of entertainments. Some of the commision merchants do a huge business on behalf of the co-operators, and there is a very good understanding on both sides."

"ORGANISATION AND ADVERTISING.

Mr. W. J. Foster's Experience.

Mr. Walter J. Foster, Chairman of the Commonwealth Canned Fruit Pool, and one of the largest fruit producers in Australasia, who was in America last year, states:—

"A New York shopkeeper buys his fruit in the markets or by auction in much the same way as a retail fruiterer does here. If the sale be citrus, the agent makes out his account sales to the grower, but forwards through the local branch of the Californian Fruit Exchange, who in turn transmits it to the packing shed or grower concerned. The money received by the agent is paid, not into the agent's account, but into a trust fund in the name of the Exchange. Agents are under a bond to the Exchange, and are directly supervised by a district representative of the Exchange. The organisation of the Exchange is efficient. Every possible channel of trade is developed. Any reputable agent can by arrangement do business for the Exchange. Growers' connection is voluntary.

The shopkeepers are assisted by a well-organised system of advertising to stimulate the consumption of fruit. Markets, both local and overseas, are kept supplied to their maximum consumption.

No price is fixed by the Exchange. The price depends on quality and the brand. The growers at all times have complete control of the Exchange, and their consignments.

The Exchange is for (1) To ensure standard of packs. (2) To ensure that agents who sell on commission or at auction are making best sales and returning full nett proceeds. (3) To daily advise growers re best markets and prices, and where over or under-supplied. To arrange transit. To advertise and find new markets. To arrange supply of orchardists requisites, etc.

An over-riding brand of "Sunkist" is used by Exchange, and the grower is guaranteed the full nett proceeds of sales, less a small charge per case to Exchange for administration.

COMMONWEALTH DOMINION FRUIT TRADE.

New Zealand Seeks Embargo on Australian Grapes.

It is to be hoped that when the resolution from the New Zealand Fruitgrowers' Conference requesting an embargo against the importation of Australian Grapes into New Zealand, is considered, the Dominion Department of Agriculture will take a level-headed view of the matter, and refuse to grant the request.

Downy Mildew is a controllable fungus disease, and the danger of New Zealand being infected by the consignment of Australian Grapes and Raisins is so remote as not to be worth serious consideration.

There is too much heard of embargoes and prohibitions these days. Mutual trade between countries should be fostered and not restricted because of the personal ambitions or interests of a minority.

Silly Rumours.—Rumours can do a lot of harm, especially when they are either untrue or only half true. Recently the public press made a great fuss about an alleged statement that the P. & O. Steamship Company had ceased to purchase Australian canned fruit owing to its poor quality. At the last meeting of the Victorian State Advisory Board, the Secretary (Mr. S. H. Moodie) said he had investigated the matter, and there was no truth in the report.

What will be the next rumour?

Spray Spreading Agents

Scientific Tests Demonstrate that by using "Spreaders" Growers can use Less Spraying Material with Greater Efficiency.

THE USE OF SPREADERS in spray materials has been receiving the thoughtful attention of leading growers and experimentalists in Australia for some time.

As a result of tests conducted at an English Research Station some extremely important conclusions have been drawn.

The experiments were conducted by Messrs. T. Parker and A. W. Long, of Messrs. Murphy and Sons Ltd. Research Station at East Malling, England.

The investigations have the approval of the Federation of British Growers, which body is endeavouring to collect funds for further experiments. The report hereunder is taken from the "F.B.G. Journal," the official organ of the Federation.

SPRAY SPREADING AGENTS.

Contributed by T. Parker and A. W. Long, of the East Malling Experimental Station.

In the United States during the past few years Spray Spreaders have received a considerable amount of attention, both by the scientific worker and by the grower, with the result that where "Dry Dusting" is not the common practice these important materials have become part and parcel of the process of commercial spraying.

In England the subject has certainly not reached such an advanced stage, and, in consequence, large quantities of liquid insecticides are annually wasted through the inefficient manner in which they are spread over the leaf surface and come into contact with the pest.

The principle with which the subject of spray spreading is chiefly concerned is that of the surface tension. The molecules in the interior of a liquid exert their attractive forces equally in all directions, but those on the surface, being attracted in one direction only, give rise to a force known as "surface tension," which is generally compared with the force which would be exerted by a stretched elastic film enclosing the liquid.

The tendency of this force is to diminish the surface area and to cause the liquid to assume a spherical shape. It follows that reduction of the surface tension will produce a corresponding decrease in this tendency, with the result that the same volume of liquid will

cover a larger surface

by forming a film, instead of a number of drops. The importance of this in spraying operations is obvious, since certain substances are known which possess the power of decreasing the surface tension of liquids.

Various materials have been used in the past to increase the "spreading" of a spray fluid over the foliage. These have included soap, saponine, quillaia bark, glue, borax, etc. Owing, however, to the chemical reaction which may take place between soap and some of the materials used as

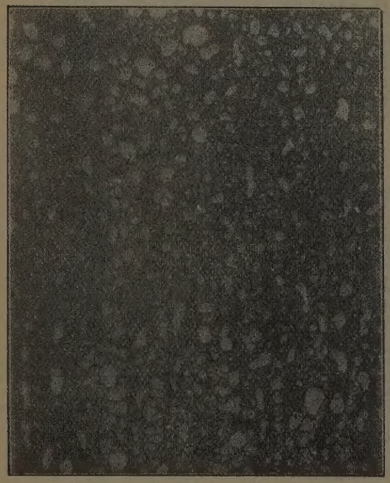


Fig. 22. Lime Sulphur without spreader.

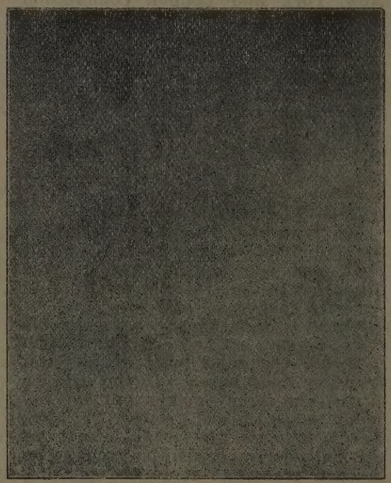


Fig. 23. The same with 0.2% spreader.

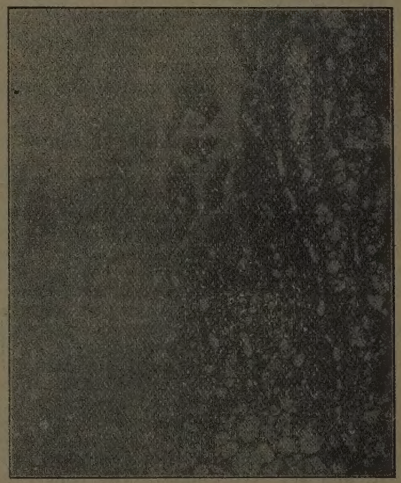


Fig. 20. A.P.S. without spreader.

insecticides and fungicides, its universal application is thereby somewhat restricted, and, in addition, to produce the desired results it is necessary to use a fair quantity.

Saponine, in many respects, gives excellent results under certain conditions, but is far too expensive to be a commercial proposition from the growers' point of view. The remaining materials, although not so expensive, give results of greater or less efficiency, and will not be further considered here.

The alkaline caseinates, among other substances, were investigated at an English Testing Station this year, special attention being devoted to calcium caseinate.

This substance was used by Peterson some years ago in the United States with lime sulphur, as an insecticide, but it is doubtful if this combination has been used on a large scale as a fungicide until comparatively recently.

Salmon and Horton (Journ. Min. of Agric., 28, 1922, p, 995), early this year published an account of some experimental work using a factory-boiled lime-sulphur and calcium caseinate for controlling Hop Mildew.

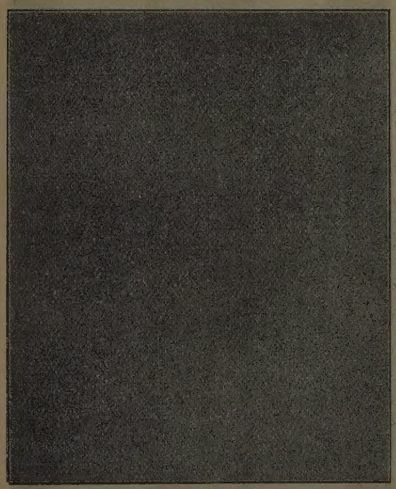


Fig. 21. A.P.S. with 0.2% spreader.

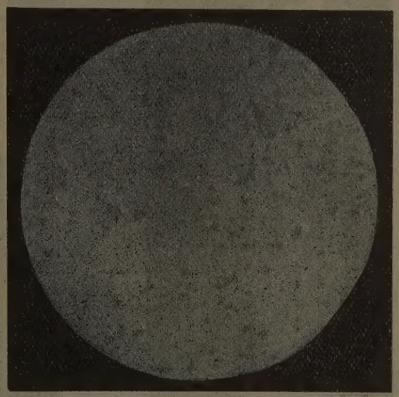


Fig. 18. Deposit of Lead Arsenate without spreader.

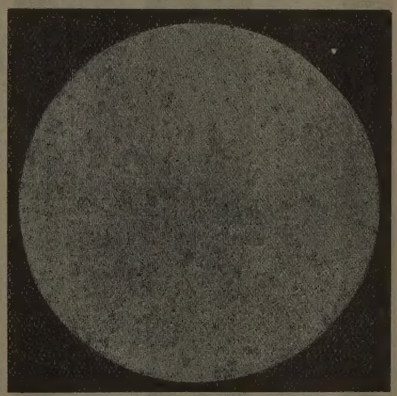


Fig. 19. Deposit of Lead Arsenate with spreader.

The results of their work are tabulated below:—

	Strength of of Lime Sulphur.	Per Cent. of Polysulphide Sulphur.	Per-Cent of Calcium Caseinate.
A.	1-99	.16	1 p.c. Fungicidal
B.	1-149	.11	1 p.c. Doubtful
C.	1-199	.08	1 p.c. „

It was observed that with A and B the patches of mildew were killed outright in twenty-four hours, while the control sprayed with calcium caseinate alone was as vigorous as before. It was also found that similar results were obtained using 1.5 per cent. calcium caseinate instead of 1 per cent.

The results of our experiments showed that a 0.2 per cent. solution of calcium caseinate appeared to be the lowest strength required to reduce the surface tension to a minimum and give a maximum spreading and wetting effect.

Experimental.

Two sheets of glass of equal size were highly polished after washing with caustic soda to remove grease. These were sprayed at equal distances with lime sulphur solution 1 in 20, with and without 0.2 per cent. of calcium caseinate. The plates were secured in a vertical position and the same pressure as far as possible maintained in each case. The plates were then allowed to drain and dry and were finally photographed. The results shown in the accompanying illustrations, Figs. 22 and 23, are self-explanatory.

Similar experiments were carried out with ammonium poly-sulphide solution at 1-100 dilution, arsenate of lead 4lbs. to 100 gall., liver of sulphur and nicotine petroleum emulsion, with similar results as seen in Figs. 20 and 21.

A further set of experiments with lime sulphur, ammonium poly-sulphide solution, liver of sulphur and arsenate of lead was performed as follows:—

A thin film of the diluted solutions, with and without 0.2 per cent. calcium caseinate, was produced on a microscope slide, the latter being then well drained and allowed to dry in a horizontal position. Photographs of these deposits are shown in Figs. 18 and 19.

It will be observed that the particles of sulphur and arsenate of lead are much closer together in the case of the solution with 0.2 per cent. calcium than in that without, suggesting that the spreader has some influence upon the

deposition of particles from solution and suspension. The practical value of this is obvious, as the spreader causes the spray to cover a larger area and form a thinner film, and as the particles of the active ingredients are deposited closer together one would expect greater insecticidal and fungicidal efficiency from a given spray fluid.

An experiment was next carried out to ascertain the effect of calcium caseinate upon the rate of settling of a suspension of arsenate of lead.

1. A suspension of arsenate of lead at the rate of 4 lbs. to 100 gallons of water was placed in one cylinder.

2. A second suspension at the rate of 4 lbs. to 100 gallons aqueous solution of calcium caseinate was placed in another cylinder.

it not only increases the wetting and spreading properties of the insecticide, but obviates the necessity of very elaborate stirring gear in the spraying machine and thus ensures the equal distribution of the poison over the orchard, providing the operator carries out this work in an efficient manner.

A number of experiments on different kinds of foliage was carried out by spraying specimens with and without the addition of calcium caseinate to the spray fluid.

It was observed that foliage having a polished and smooth surface, such as ivy, apple, etc., was covered with a uniform and unbroken film in the case of lime sulphur and calcium caseinate, but was spotted when sprayed with lime sulphur alone.

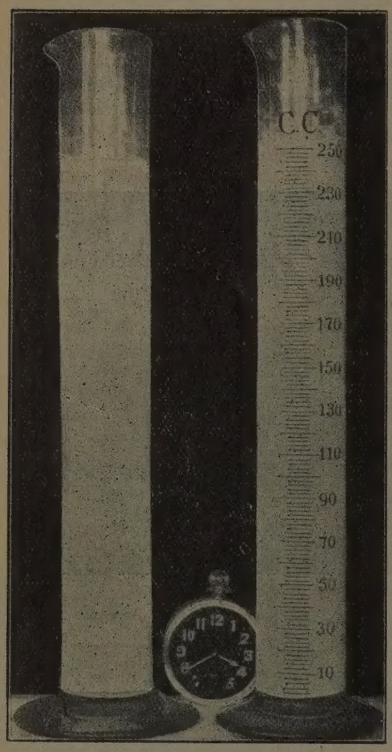


Fig. 1

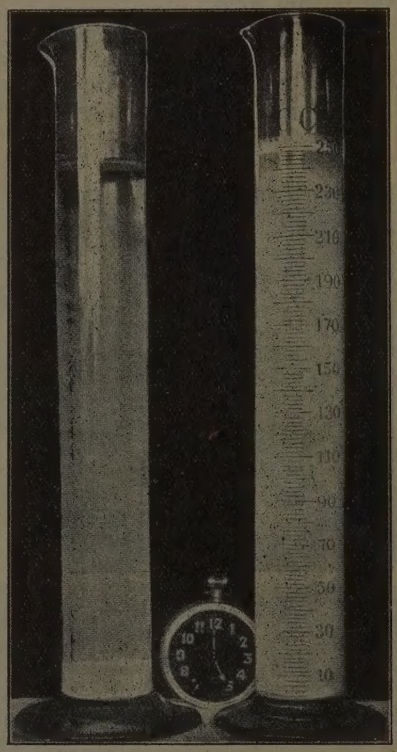


Fig. 2

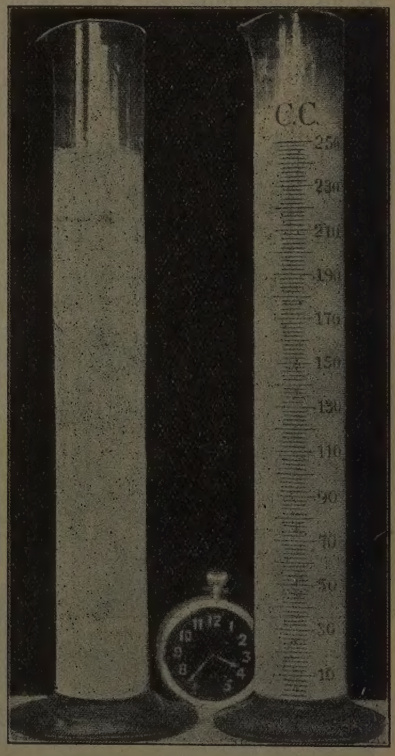


Fig. 3

(1) Lead Arsenate suspension without and (2) with 0.2% Calcium Caseinate. Figs. 3 and 4 ditto. Note the sediment in Figs. 2 and 4.

These were carefully shaken simultaneously for one minute, allowed to stand, and then photographed at intervals.

It will be seen from the reproductions, Figs. 1-4, that in five minutes there was evidence of sedimentation, and after a quarter of an hour the arsenate in the first suspension had nearly all settled out; at the end of one hour complete settling had taken place, while in the calcium caseinate solution the arsenate was still showing excellent suspension six hours later.

These were carefully shaken simultaneously using calcium caseinate with arsenate of lead;

Attention was next directed to leaves having a spiny surface, such as hop and marrow, but the fluid, either with or without the spreader, appeared to collect in globules on the apex of the spines. The amount of leaf surface covered seems to depend on the proximity of the spines to one another and to the extent of their distribution over the leaf surface. As was expected, an increase in pressure on spraying produced a better covering with the spray.

Attention was also directed to the influence of calcium caseinate upon the spreading of lime sulphur and other washes over leaves having a heavy

waxy bloom on the surface, such as carnation, savoy and cabbage, and it was found that the spreader had little effect in increasing the spreading, the effect being in fact little better than that produced with the spray itself. This, no doubt explains the difficulty experienced in controlling **red spider** on carnations, and suggests that dry dusting would, in this case, produce better results than wet spraying.

Other experimental work has shown that **apple scab** can be controlled with lime sulphur at 1 in 160, used in conjunction with calcium caseinate, without defoliation or russetting.

American **gooseberry mildew** can similarly be controlled without defoliation or disfigurement of the fruit resulting.

During the past season a series of experiments was carried out using Nicotine Petroleum Emulsion for controlling red spider on cucumbers, and it was observed that at a dilution of 1 gallon to 160-200 gallons of a 0.2 per cent. calcium caseinate solution the pest was successfully controlled, without the production of any deleterious effects upon the plants.

This wash, without the spreader, had been previously used at 1 in 80 and 100, especially for capsid bug on apple, but in conjunction with the spreader this year it has been successfully used on a large scale at 1 in 160, thus increasing its value by 100 per cent.

Summary of Results.

1. Calcium caseinate greatly increases the wetting and penetrating power of a wash, and, in consequence, the active ingredients come into closer and better contact with the leaf and with the pest; the maximum effect (whether insecticidal or fungicidal) is thus obtained.

2. A 0.2 per cent. solution of calcium caseinate is approximately the lowest strength which will produce maximum wetting.

3. Calcium caseinate appears to influence the deposition of particles from solution and suspension, causing them to be deposited in closer proximity to one another.

4. It greatly retards the settling of arsenate of lead from suspension.

5. It apparently increases the insecticidal and fungicidal efficiency of some washes by 100 per cent. when these are compared with similar concentrations in ordinary water.

6. It might be used with great advantage for assisting the penetration of washes in the control of woolly aphis.

7. The results of the experiments suggest that winter washing with lime sulphur in conjunction with calcium caseinate might be successfully carried out at a dilution of 1-40 instead of at the present winter strength of 1-20.

Note.—Figs, 20 and 21 on pp. 272-3 mentions "A.P.S." This refers to Ammonium Poly-sulphide.

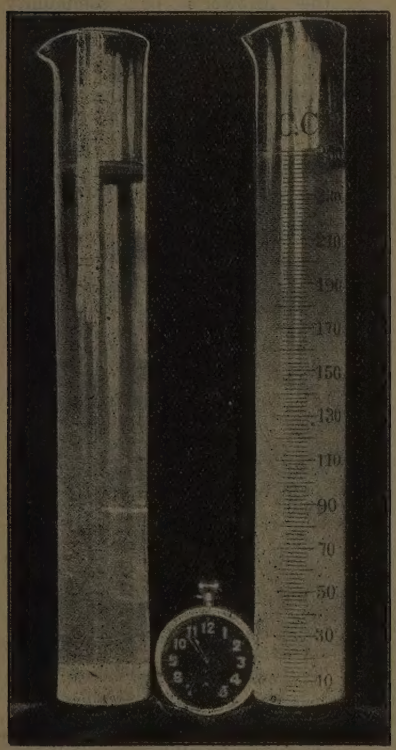


Fig. 4

IMPORTATIONS INTO GREAT BRITAIN.

Regulation of Foreign Foodstuffs Proposed.

But Duties are not Suggested on Empire-grown Products.

A change in thought is slowly manifesting itself in the internal politics of Great Britain.

Pressure is now being brought to bear on the British Government to **regulate or restrict the importation of foreign (but not British Empire) horticultural produce for the protection of home grown supplies at such times as there is a sufficiency of home fruits and vegetables to meet all possible demands.**

In an editorial in "The Fruitgrower," England, April 12th, 1923, the following appears:—

"After long years 'The Fruitgrower' has the satisfaction of knowing that its policy of the **Scientific Regulation of Foreign Importations** has been adopted in principle by a committee of inquiry set up by the Government. This scheme was elaborated in our columns as far back as 1911 and 1912, and was subjected to much comment, adverse as well as favourable. To-day it forms part of the Horticultural Parliamentary Programme. Whether the Government declines to adopt the recommendations or not does not alter the fact that their selected economic expert advisers have put it forward as one of the steps whereby the home industry's welfare is to be secured. That a body of economic experts with no axes to grind should have recommended a policy that will be instantly challenged by Free Trade theorists and idealists shows the direction in which things are moving, and are bound to move, since no country whose industries are overloaded with direct taxation can struggle indefinitely under a system that allows its home markets and industries to be overrun by the products of the protected untaxed, and sometimes even State-aided, industries of the foreign competing countries."

SUGAR DUTY IN ENGLAND.

Questioned in the House of Commons in May, the Chancellor of the Exchequer stated that the net amounts of duty on breakfast foods collected in Great Britain and Northern Ireland during the financial year 1922-23 were: — Tea, £11,555,000; sugar, £40,191,000; coffee, £416,000; cocoa, £1,290,000; dried fruits, £841,000; total, £54,293,000. Sugar includes the duty collected in respect of the sugar content of marmalade and jam, £14,000; and condensed milk, £937,000. — "Imperial Food Journal."

Queensland Fruitgrowers' Conference.

MARKETING OF FRUIT TO BE REORGANISED.

Act of Parliament to be Passed, and Government Finance Requested.

DECISIONS of far-reaching importance were arrived at by the Conference of Fruitgrowers called by the Council of Agriculture, to consider proposals for reorganising the marketing of Queensland fruit. The scheme drawn up by a Special Committee of the Queensland Producers' Association was adopted. Parliamentary sanction to the proposals will be sought, also Government guarantees. The control of marketing is to be vested in a "Committee of Direction."

THE CONFERENCE, which was attended by over 100 delegates from local producers' associations, was held in the lecture hall, Council of Agriculture Building, Turbot-street. The business as set out was to consider concrete proposals for the reorganisation of the fruit industry, as recommended by a special committee of the Council of Agriculture. The Chairman of the Fruit Standing Committee (Mr. W. Ranger) presided, and among those who occupied seats on the platform were the Director of Fruit Culture (Mr. A. H. Benson), the State Trade Commissioner (Mr. W. H. Austin), the Director of the Queensland Producers' Association (Mr. L. R. Macgregor), and members of the Council of Agriculture.

Opening by Minister.

The Minister for Agriculture and Stock (Mr. W. N. Gillies), in declaring the Conference open, said he considered it would be one of the most important ever held by fruitgrowers in Queensland. No industry cried out for better marketing of crops than did the fruitgrowing industry. The only chance for the industry to make advancement lay in reorganisation. That was the reason the Council of Agriculture had been brought into being.

Difficulties of Growers.

The Director of the Queensland Producers' Association (Mr. L. R. Macgregor) outlined the proposals recommended by the Special Committee. He also spoke of the difficulties against which fruitgrowers had to contend, and pointed out their duty to place their product on the market in an attractive condition.

The Proposals.

The concrete proposals submitted to the meeting by the Special Committee were as follows:—

1. That an Act of Parliament be asked for covering the reorganisation of the fruit marketing.

2. That an endeavour be made to use local organisations and corporations already in existence and existing agencies of distribution as far as practicable.

3. That provision be made by such Act for legal constitution of local fruitgrowers' marketing associations operating at present without due incorporation, either on a non-capital non-profit basis or on a basis of capital as may be desired.

4. That local organisations be allowed to trade in fertilisers, fruit cases, and other growers' requisites by consent of the Central organisations, but the activities of the Central organisation shall be confined to the marketing of fruit.

Control of Central Organisation.

5. That each local organisation be a member of the Central organisation to control marketing in Brisbane, Sydney, Melbourne, Adelaide, and elsewhere.

6. That the Central Growers' Organisation be controlled by a Committee of Direction elected annually by members of the local organisations, and one member nominated by the Council of Agriculture. The Committee of Direction shall not exceed ten in number, and shall be comprised as follows:—Banana growers, 2; Pineapples, 2; citrus, 2; deciduous, 2; small fruits, 1; and a nominee from the Council of Agriculture. The Committee of Direction shall control matters of general policy, but may devolve certain powers upon an executive of three, to be elected from among their own number.

7. (a) That the growers' representatives on the Committee of Direction shall be elected by growers on a sectional basis; and (b) that the members of the Committee of Direction shall retire annually, but shall be eligible for re-election.

8. The central organisation shall be a non-profit, non-capital organisation.

9. **That the proposed Act shall vest in the Committee of Direction control of the marketing of all Queensland fruit as from a date to be fixed.** Fruit to be allowed at the outset to filter through to existing channels as at present, control gradually to be exercised as bringing to fruition of a policy of extension of markets justifies this, or as an approaching glut season renders this urgently desirable.

Suggested Policy.

10. That it is desirable to allow the Committee of Direction to formulate and carry out its policy, but as indicative of what could be accomplished under the method of control recommended, suggestions are set out in clauses following, and that power should be provided in the Act for the committee to carry out the suggestions set out hereunder:—

(i) A vigorous policy to be pursued to attain the objective of ensuring that all fruit transmitted to market will pass through either **community packing sheds,** or, alternatively, a form of inspection in cases in which the application of the packing shed principle is impracticable or undesirable.

(ii.) Arrangements governing loaders to be extended to the fullest degree under control of central organisation, and all fruit to be **consigned in bulk** where possible.

(iii.) Provision for institution of packing sheds on requisition of the growers concerned, and this under conditions to be arranged by the Committee of Direction.

(iv.) Fruit to be marketed under the grower's or community brand, and at the outset growers to be invited to nominate those agents by whom they desire their fruit to be handled, and, in order that as little disturbance as possible may result, an endeavour to be made by the Committee of Direction to the effect that fruit which has been marketed by growers for years through one agent shall still go through that agent.

Arrangements with Agents.

(v.) Agreements embodying guarantees to be entered into by Committee of Direction with the agents. The Committee to maintain constructive and to seek to eliminate destructive and inimical competition, and to **limit the number of agents** if desirable.

(vi.) The Committee of Direction should appoint a **receiving representative** in each market who would be placed in a position to compare the results and gradually endeavour to bring about stabilisation.

(vii.) Agency or other representation should be established in the large towns in Queensland, such as Gympie, Maryborough, Rockhampton, Bundaberg, Mackay, Cairns, Mount Morgan, Toowoomba, Roma, and Goondiwindi, as well as in such places outside the State, as Newcastle, if necessary.

Country Fruit Trains.

(viii.) Consideration should be given to the running of a special fruit train on country railways, either by affording existing distributors a limited time in which to build up such a trade subject to the Committee of Direction stepping in if it be not sufficiently quickly developed, or alternatively a straight-out arrangement under which such fruit trains would from the inception be accompanied by a representative of the Committee of Direction to deal with the sale of fruit at places other than those mentioned in the preceding clause.

(ix.) Consideration should be given to instituting negotiations with the Commissioner for Railways with a view to railway station masters acting as agents on a small commission basis.

(x.) Consideration should be given to the fixation of two prices, wholesale to the retailer, and a retail price to the private buyer, encouragement to be given to country fruiterers and storekeepers who sell fruit and who should be recognised as being a good asset to the industry.

(xi.) All distribution should be effected as far as possible through trade channels, either established or to be established.

Co-operative Retail Shops.

(xii.) Encouragement should be given to the establishment of co-operative retail shops by bodies of a growers' society, but not under the Committee of Direction, in which connection the following observations are offered: —(a) Buying in open market gives first-hand knowledge of wholesale trade and leads to effective control. (b) Purchasing on a large scale would stabilise market, as the shops would be run in growers' interests, fair prices would always be paid, and extra efforts to sell retail would be made in times of over supply (e.g., fruit carts). (c) By selling honestly the public would be encouraged to continue and extend their buying. (d) The primary object being to give a reasonable return to the grower, the consumer would be encouraged by being charged reasonable prices. (e) Inferior fruit (i.e., below reasonable standard) would not be sold. (f) Buying for the shops could be combined with buying for country establishments. The bigger the connection secured the more could the market be dominated until it might be possible to assume entire control.

Developing the Shops.

(g) This method of attack could be developed gradually and systematically. The wholesale trade demands extended credit, and an accurate summing up of buyers' stability. The vested wholesale interests are firmly entrenched, and would jealously guard themselves. Retailers generally have interests other than fruit, and are not closely banded together. Fresh territory could be explored and, if thought advisable, competition need not be entered into where a district was adequately served. Fruit products (pure fruit drinks, fruit sweetmeats, canned and dried fruits, etc.), could be handled as well as fresh fruits. (h) No heavy finance is required. Money is turned over quickly, and each establishment would be self-supporting probably from the start. (i) There is no possibility of serious loss. The risk is spread very widely, and the exact position of each establishment known weekly. A big number of shops would not be opened simultaneously. The ground captured at each advance would be consolidated before a fresh offensive was undertaken. (j) Ample precedent is available in the big success of the multiple shop establishments in England (e.g., Lipton's grocery), Maypole Dairy Company (butter, margarine, and tea), Hunter's (tea, sugar, and condensed milk), Public Benefit Company (boots and shoes), Mansfield (boots and shoes), Home and Colonial (tea, sugar, and condensed milk).

Extension to the Country.

(k) If establishments were opened at such centres as Toowoomba, Ipswich, Rockhampton, and Mackay, the representatives there could probably also act as "receiving agents," thus minimising the expenses.

(xiii.) Marketing both in the sphere of the local and central organisations should be conducted on a non-profit basis, growers securing full benefit of freight concessions, and any other savings. Expenses, including advertising, to develop markets, if, and when desirable, should be met by deductions from account sales, either on a case or bunch basis, or on a basis of percentage of values or such other method as may be determined by the Committee of Direction.

Government Financial Assistance.

(xiv.) Request should be made for Government guarantee to enable financing of proposals herein.

Note.—Financing under the scheme set out herein does not involve trading risk. Trading by Committee of Direction is not advocated. Del credere would be carried out by existing distributors whom it is not proposed to eliminate. The finance therefore embraces only initial establishment until funds are available. The temporary overdraft at the bank would not exceed £——, and for this only would Government guarantee be sought.

(xv.) Steps should be taken to obtain legislation for the standardisation of fruit agents' accountancy and bookkeeping methods, which would show, among other items, the buyers' names and addresses.

Note.—If by reason of any of the foregoing clauses difficulties should arise with existing fruitgrowers' organisations having a similar or allied object, every effort should be made to have these difficulties amicably adjusted.

11. Provision should be made for the scheme to be operative for a term of three years, and to continue thereafter unless on requisition of 500 growers a ballot be demanded, and a majority of registered growers demand discontinuance."

Support for the Scheme.

The Chairman read a minute which the Director of Fruit Culture had forwarded to the Minister, in which he stated that he was thoroughly in accord with the scheme.

The Banana growers of the Tweed and Richmond River districts forwarded a message congratulating the Queensland fruitgrowers on their attempt to deal with marketing problems, and stating that they had carried a motion advocating if the scheme were adopted, that the Banana growers of New South Wales should be brought in line with such scheme.

Consideration of the Proposals.

The meeting dealt with several of the Special Committee's proposals, the adoption of which was moved by Mr. Macgregor.

On proposal 1, Mr. A. A. Baker moved an amendment setting out that an Act of Parliament should be passed "embracing a system of co-operative marketing of fruit and vegetables."

Mr. Macgregor pointed out that the Conference was one of fruitgrowers alone, and he suggested that the additional words should be added to the proposal, setting out that the Governor in Council might extend the provisions of the Act to vegetables. Mr. Baker accepted the suggestion, and withdrew his amendment. Subsequently effect was given to Mr. Macgregor's suggestion.

Another delegate submitted an amendment providing for a plebiscite of the growers in respect to No. 1 proposal, but it was defeated by an overwhelming majority.

The clause was carried without amendment.

Proposals 2, 3, and 4 were agreed to practically without discussion.

Election of Committee of Direction.

Proposals 5, 6, and 7 were considered together. The Conference, by a big majority, decided that the method of the election of the Committee of Direction should not be by direct ballot on the part of the growers, but through the sectional groups of fruitgrowers.

An attempt in respect to Proposal 6, to reduce the number of the members of the committee to 9, and to give the Banana growers three representatives, Pineapple growers two, citrus growers one, deciduous growers one, and growers of other fruits one, was defeated. It was resolved, however, to alter "small" fruits to "other" fruits.

On the motion of Mr. Macgregor it was resolved that the first committee should be provisional, and should hold office for six months after the passing of the Act.

SECOND DAY.

Fruit Pools Approved.

Pooling and its effects and possible effects on the fruit industry was the chief line of discussion at the second session of the Queensland Fruitgrowers' Conference. The Conference divided itself into two parties—those who considered it vital to have unanimity in marketing organisation, and those who considered that any form of pooling was fatal to the production of high-class fruit.

When clause 9 of the proposals, which proposes to vest in the Committee of Direction the control of marketing of all Queensland fruit, came up Mr. Andrews (Sandford) moved as an amendment:—"That the Committee have no power to form pools."

Mr. Gower seconded the amendment.

Mr. Edwards (Cooroy) said he believed that pools were frequently necessary.

Mr. M'Gregor suggested that the position might be met by inserting a provision that growers' fruit shall secure its own price and not be pooled with inferior products, except in case of a condition of emergency threatening the whole industry.

Grades and Prices.

Mr. Andrews: My Association contends that there are preferential grades, and in pooling all grades bring the same price. This removes the incentive to produce first-class fruit. It encourages a levelling down process that is injurious to the industry.

Mr. M'Gregor: That principle is wrong. Grading protects the industry. Lemons can be bought by cable quotations from Italy on the grade system with absolute safety. We want to bring about a similar position with the fruits of Queensland. To adopt any other policy would be fatal. Certain definite grades and brands should be established and encouraged. Differentiation between grades would be highly inimical to the whole industry.

Mr. Skaner (Eumundi) supported the amendment. He said that several attempts had been made to "ring in" this clause. It gives power to form pools, and that was opposed to the growers' interests.

Mr. Baker (Thulimbah) said he considered the clause was vital to all they had discussed. If it were dropped their efforts for organised marketing would have been useless.

The Pineapple Industry.

Mr. Ross (Summit) said he believed Pineapple growers were "on a good wicket." There had been a lot in the Press about rotting crops. The Trade Commissioner should have grappled with that. Could it not have been arranged that the State canneries should deal with abnormal situations, such as the one complained of? Pineapples were selling at 6d. a dozen on the field, but consumers were paying dearly enough for them.

Mr. Andrews contended that if new markets were opened up there would be no gluts.

The amendment was defeated by a large majority, and clause "9" was passed as drafted.

Clause 10, sub-clause (i.), "packing" was agreed to. Sub-clause (ii.) "loaders" and ((iii.) "local packing" were agreed to. It was then decided that sub-clauses iv. to xv. should be agreed to, with unimportant modifications, as drafted, except in clause v., which was amended by consent to provide that agreements could be entered into with canners as well as agents where guarantees were concerned.

Alteration of Constitution.

Mr. M'Gregor moved that it should be a recommendation to the shareholders of the S.Q.F.S. to alter its constitution, eliminating individual shareholders, and providing that shareholders should be local associations, and that this should be set out in the Act and that the Society should agree to the power being set up in the proposed Act to enable the transposition to be effectively carried out. He pointed out that this would be an essential to the effective carrying out of the proposed co-operative retailing scheme. The motion was seconded and carried.

It was decided that the Association should co-operate with the Government in the proposed legislation, and that there should be an annual conference of growers.

The subjects discussed and passed at the first session were then recommitted for final consideration in their amended form.

The clauses of the scheme were agreed to without amendment, and the proposal passed all stages.

Directors.

Elections for the Provincial Committee of Direction resulted as follows:—

Banana section: W. B. Cathcart (Landsborough), C. Christie (Currumbin).

Pineapple: H. Vinicombe (Glasshouse), J. J. Thomas ((Montville).

Citrus: T. H. Brown (Montville), L. G. Swain (Flaxton).

Deciduous: J. S. Mehan (Stanthorpe), D. Ferunda (Stanthorpe).

Other fruits: H. Archibald (Stanthorpe).

The newly elected members returned thanks, and the Conference concluded.

Queensland Cultural Notes.

Pest Control.

(By Our Special Correspondent.)

A RATHER PROLONGED and cold winter has retarded or kept growth in abeyance in southern areas, and frosts have, in parts, been more frequent than welcome.

Reference is frequently heard regarding the utility of cold conditions in destroying exotic pests and diseases, but a little experience in the tropics will convince the most sceptical that the generality of such pests are, in the warmer parts, not only less numerous, but more readily controlled.

Even the pink wax scale, which is at present giving southern citrus growers so much concern is seldom persistent enough to warrant the trouble of spraying.

Brisbane markets have been fairly well supplied with citrus fruits, above average quality and prices, particularly for Mandarins, afford some recompense for the light crop.

Orange Bug Troublesome.

Early last season the Brown Orange Bug made very serious inroads on the young fruit in the principal citrus area, and efforts, mostly spasmodic, to cope with it were of little avail. On account of its habits, and (except in the very early stages), the protection of an impenetrable armour, manifold disadvantages are apparent.

The Entomological branch is now devoting earnest attention to the pest, and much useful information has been obtained, as a result of which it is confidently anticipated that experiments based on the knowledge gained will lead to satisfactory results.

Unfortunately for the entomologist, the average grower is rather deficient in appreciation of detail, and not appealed to by the tedious investigation and close observation necessary: rather they are looked upon as indications of imbecility.

Expert Scientists Needed.

The citrus and other semi-tropical fruitgrowers, also the growers of tropical fruits (particularly Bananas), are airing their grievances re lack of consideration in comparison with that accorded to temperate fruits, and it will be admitted their complaints are justified.

The actual net value of falling off in export of Bananas from one district for the month of May, 1923, as against May, 1922, amounts to well over £1,000, and the attention devoted to the cause "bunchy top" has been comparatively nil.

Operations, investigations, and inspections regarding the fruit fly in

temperate fruits is being referred to as incurring annual expenditure exceeding the amount expended in connection with all other fruits.

A "Boomerang" Regulation.

The promulgation of latest regulation regarding the cold storage of most coastal fruits for 21 days before they can be admitted to the area which includes temperate fruits, is likely to have an effect in rebound, by the citrus growers, with at least equal justification, requesting a similar measure against Stanthorpe fruit coming to the coast. Last year Stanthorpe can claim to have been most generous and consistent in distributing larvae of the fly.

Citrus Notes.

In some districts citrus fruits have been entirely removed from the trees, in others a good proportion of the fruit still remains. As the fruit is removed a general cleaning up is (or should be) effected.

Following pruning, spraying with fungicide is most essential on account of Black Spot of Orange and Mandarin, and also scab of the latter.

Spraying against scale insects whilst the eggs, or young insects, are protected by the parent covering, is ineffective. A superficial examination of scale sprayed at this time of year may suggest some effect, but it should be remembered that the old scale mostly perish from natural causes.

Prune Custard Apples Now.

Toward the end of month **Custard Apples** will require pruning. Operating too early has a baneful effect upon the tree, particularly if a young specimen.

With old developed trees pruning is a simple matter, but in early years an experienced operator should be employed, as trees can be either made or marred at this stage.

Trees carrying branches with dead twigs, or producing inferior foliage, should be examined around their bases for indications of canker, which readily yields to treatment previously recommended in the "Fruit World."

Planting Grapes.

Though the extent of orchard planting this season has been somewhat restricted, **enquiries regarding Grape planting have been numerous.** Market rates indicate the Grape being a reasonably profitable crop.

The range of varieties adapted to coastal conditions is limited. Black Hamburg, Black Prince, and Royal Ascot are most in favour, and given a suitable and fertile soil, with fair treatment heavy yields are recorded. Gros Colman is inquired for, but in this State its quality is inferior, and the berries are very subject to burst under showery conditions.

Pruning and planting should be completed, the land well worked and liberally fertilised. An impoverished condition will be reflected, not only in the ensuing crop, but a poor growth also ensures a poor crop the following year.

They Say

That the report of the Conference of New Zealand Fruitgrowers makes interesting reading. Growers seem determined to put business men, not growers, in control of a stabilisation policy.

That powerful propaganda is being developed in England against the proposals for Dominion trade preference.

That the "human element" enters vitally into the idea of co-operative retail fruit shops as proposed in Queensland — competent managers (usually hard to get): plus inspectors, auditors, and expensive bookkeeping systems—all of which must be paid for, by whom?

That the Housewives' Association of Victoria is prepared to again assist in distributing the season's crop of berry fruits.

That proposals are afoot for a pool of American and Australian wheat, and for South African and Australian citrus fruits to prevent gluts on the world's markets. Australian opinion is dubious as to the practicability of the schemes.

That the legal mind of the Australian Court judge in the recent fruitgrowers case failed to grasp the essentials of ordinary trade. The gibe about "Italian shopkeepers" quite misses the point that in the irrigation areas, where the awards are felt most, the fruits grown are largely for canning and drying.

That a citizen with legal training "unconnected with the fruit industry" is sought by a sub-committee of the Victorian State Advisory Board to report on fruit marketing. A committee of growers and traders could do the work more effectively and at no cost.

That now is the time to be on the look out for scions with plump buds from productive trees where re-working of varieties is contemplated.

That the Tasmanian State Advisory Board proposes taking legal action in respect of claims on damaged consignments of exported Apples.

That Tasmania is seeking the imposition of an embargo in the United Kingdom against Apples from other than the British Empire from April 1st to June 30th each year.

That pruning demonstrations should be more frequent in fruitgrowing centres. Note the interesting report from our Murray River Correspondent

That canners and jam manufacturers are penalised to the extent of £5 per ton under the new sugar pooling scheme.

That the award about to be made by Mr. Justice Powers will probably operate as from 19th June.

That growers in South Australia object to branding second-hand cases, provided such cases are of the standard bushel capacity.

That stocks of Commonwealth pool canned fruit are selling freely locally owing to a reduction in the price.

That despite the fact that a Government-financed fruit pool has been operating for the past three years, the area under fruit in Australia during the past two years has increased by over 29,000 acres.

That the Irrigation Commissions of South Australia, Victoria and New South Wales should have a conference before continuing the planting programme of certain fruits.

OF VALUE TO GROWERS.

Ask yourself these questions:—

What is the acreage under fruit and vines in Australia?

And in New Zealand?

What is the annual production and value of the fruit crops?

By how much has the acreage increased during the past two years?

What are the planting programmes of the several Irrigation Commissions?

What quantity of fruit is imported annually into the United Kingdom?

How much comes from Australia? from South Africa? from U.S.A.? from Canada? from Spain, and other countries?

What is the quantity of Oranges produced in Australia?

How much fruit cold storage space is there in Victoria? in Australia? in New Zealand?

What is the quantity of jam and canned fruit produced in Australia?

How much is exported?

What marketing systems are in vogue in the several Australian States?

Am I in touch with recent developments in the fruit industry?

What is a simple yet effective bookkeeping system?

Where can I find a complete guide for spraying against insect and fungus pests?

Read the Fruit World Annual for the answers to the above and a thousand other questions.

Price, 3/-, post free.

Published at 9 Queen St., Melbourne.

Acknowledgment.—The Editor acknowledges having received from Mr. J. C. Rough, Mundaring, W.A., interesting photos showing some Perth business girls pleasurably and profitably spending their time in planting Almonds at an orchard at Mundaring, W.A.

The Growing of Passion Fruit

VALUABLE CULTURAL HINTS

Success at Kurrajong, N.S.W.

The article herewith was prepared by Mr. W. S. Arnold, Manager of the Soldier Settlement at Kurrajong, N.S.W.

In the April and May issues of the "Fruit World" the subject of Passion fruit culture was dealt with from a Victorian aspect.

The photographs were taken, not at Kurrajong, but at Glenorie, several miles distant. Substantial quantities of fruit were produced from a vine under a year old.

The development of an export trade is most desirable.

THERE ARE QUITE a number of varieties of edible Passion Fruit, such as Mexican, Banana, Granadilla and others, but the one we here are most interested in is the common purple fruited one, known as the Passiflora edulis. It is a native of Southern Brazil, and has fruit about the size of a hen egg.

The Kurrajong (N.S.W.) district seems to be peculiarly adapted for the growth of Passions. These can be grown on any site or soil that will produce winter peas. I have seen Passions grow luxuriously in sandy soils, loamy soils, and on heavy loams.

The best site for the Passion is undoubtedly the well-drained sloping north-east aspect, protected by a break wind on the west and south.

Some use Passions to trellis between their young fruit trees. The returns will more than pay for the upkeep of the young orchard when handled rightly. To a man of small means the quick returns appeal, but personally I prefer to grow the vines by themselves, as I have seen both trees and vines checked detrimentally, by adverse weather conditions, at a critical time.

The Seed.—Great care must be taken that the seed is from vines free from woodiness (the great curse of the vine). At present many growers are obtaining their seed from Norfolk Island and Queensland, as woodiness is not very much in evidence in these fruits. However, fine results are obtained if one is careful in getting seed from vigorous, clean vines in his own district, and from my experience results warrant such selection.

As there are only required about

300 plants to the acre

with vines 12 feet apart, and in trellises of the same distance, 12 good fruits would provide ample plants for that area. The seed can be thinly sown in a warm open seed bed in autumn to be ready for spring. The hardier the plant the better, as when put out they must be kept growing from the very beginning. Although **spring is the time** for planting, commercially Passions can be planted during any of the spring, summer and autumn months if the weather is moist enough.

Preparation for Planting.—Land newly cleared, but from which one season's crop (preferably peas) has been grown, makes an ideal area, as the ground becomes sweet and in good condition, with a fair amount of organic and nitrogenous matter, etc., in it.

Before planting, the trellises should be erected, the posts beings 20 feet apart, and 5 feet out of the ground, and 2 feet in the ground.

The end posts of the trellis must be substantially stayed and rammed in as there is a very great weight to support when the vines are full grown. No. 8 wire is threaded through holes made about 2 inches from the top of the post on the same level, and about 6 inches apart. Black wire is cheaper, and does not burn the young vines the first year as is sometimes the case with galvanised wire. I recommend two wires on top.

Trellises running north and south seem most favored, as the sun can shine on both sides of the vine; especially is this needed for winter Passions. The trellis at the western end should be made higher than the others to act as a break-wind.

Sticks about 6 feet long are let in the ground along the trellis about 12 feet apart, and fastened securely to one of the top wires with tie wire; this is imperative.

If the stake is not rigid the young vine often gets broken through the stake getting displaced. A little blood and bone dust worked around the stake will help the young plant wonderfully when planted.

Closest attention must now be given to clean cultivation.

The young vine must be trained with a single stem till the wires are reached. All side shoots must be carefully removed, but not the leaves, or you will have a sun-scalded plant, which means a check (possibly resulting in woodiness).

Once the trellis is reached the vines can be trained both ways until the wires are covered.

Pruning. — Pruning is essential after the second year, as it produces the best paying crops and prolongs the commercial life of the plant. If left unpruned, the plant practically exhausts itself in four years, whereas by judicious pruning and manuring vines can be kept profitable for six to eight years.

On our red soils they last longer than the lighter ones.

The summer crop coming in about February seldom pays, as the market is well stocked with fruit, so we

prune in November

to within 4 inches of the trellis to miss this market, and to induce a new growth that will produce an early and payable winter crop.

Some orchardists leave pruning until January and February, and secure a late winter and an early spring crop, which is perhaps as profitable as the late winter crop. If one has a large area it is wise to work for both these markets.

Pruning and manuring at the same time, especially if followed by a good rainfall, will cause a strong growth, which is almost a preventive from woodiness. Whilst on the subject of woodiness, I might state that it was the only disease I had to combat. It is a bacterial disease found mostly in vines past their zenith of growth. It appears when the development has been checked by carelessly plowing too near the vines, thereby destroying root fibre, by want of manure at the right time, exposure to bleak, cold winds, a heavy frost, or any other condition that checks the growth.

Manuring.—In a series of experiments conducted with Passions, the Department of Agriculture found the best results were derived by an application of 5½ cwt. sulphate of ammonia, 3 cwt. superphosphate, 1½ cwt. sulphate of potash to the acre, or at the rate of about 4 lbs. of manure to each vine.

Cultivation of Vines.—The best method is to prong-hoe 2 feet on either side of the trellis in winter, and chip with flat hoe in the warmer months. Between these worked strips cultivate with a spring tooth or disc harrow in preference to the plow.

Vines are best manured in spring and autumn.

It is always well to stir the land after every application of manure, and after every fall of rain.

Cultivation conserves the moisture and mellows the soil and keeps the plants growing.

Picking, Grading and Marketing.—In the hot summer months the Passion should be picked every day or at least every other day to get the best returns in Sydney; for Melbourne and New Zealand one can pull on the green side, but they must be well colored for any market.

Grading is absolutely essential, not only in size, but in color and quality, not putting any crinkly or

woody ones with smooth firm ones of the same size. On no account "top" the cases. One's brand becomes quickly known in the market, and buyers will purchase readily once they know the grades are uniform. The figures following are for 15 half-bushels sent in one consignment, and demonstrate the value of grading. (Passions then were fairly cheap)—5 "specials" sold 2 at 12/-; 3 at 11/10; 5 "A1" at 10/-; the remaining five sold thus—1 at 4/9, 3 at 4/8, 1 at 4/3.

On fair land you can average about 230 cases per acre per annum. After all expenses are deducted, one can clear £40 per acre.

Concluding Remarks.

Passions ship readily to New Zealand and realise 30 per cent. higher prices than Sydney markets. I sent two cases to England by a friend, just to see if they would carry. So far the English people have not acquired the taste, and hence the demand is

Passion-fruit growing at Mr. Walker's orchard, Glenorie, N.S.W. Vines planted in October, 1922, crops harvested before July, 1923.

small. Same can be said of America. The Department sent 12 boxes to the Trade Commissioner at San Francisco, in order to test the demand for this fruit and to determine the best method of packing. Three styles of packing were adopted—wax wrappers, ordinary wrappers, cork dust. The fruit arrived in good condition. Those in wax and ordinary paper were excellent, but those in cork were riper, more shrivelled.

PASSION FRUIT PULP.

How to Preserve It.

It is quite a simple matter to preserve the edible portion of Passion fruit in the form of pulp, a product which, if properly prepared, retains all the flavour and bouquet of the fresh article for an almost indefinite period, and which can be used for all the purposes for which Passion fruit is ordinarily suited.

To make a pint of pulp takes about 2½ lb. of fruit. The fruit need not be smooth-skinned; in fact, the pulp from wrinkled fruit is the sweeter. No sugar is needed, the only preserving agent employed being sterilisation. The process is as follows:—

Cut the fruit in halves and remove the pulp by squeezing into a glass or enamel receptacle. As the product will not keep long after having once been opened, the small consumer will find it the best plan to use the smallest jars of the ordinary fruit-bottling pattern.

The seeds may either be allowed to remain in the pulp or strained off—the strained product is principally used as a flavouring for drinks, and so on, but the whole pulp gives a more characteristic product.

If the pulp is strained the bottles may be filled within a quarter of an inch of the tops, but if whole pulp is used half an inch should be allowed, as the seeds swell on being heated. Put on the rubber rings, fix down the glass tops, and place the jars in warm water in some suitable receptacle. Bring up the temperature of the water to 190 degrees Fah., and keep it at this for 30 minutes.

It is important that the temperature should not be allowed to rise beyond the point mentioned, as greater heat causes the seeds and juices to become separated, and the whole to assume an unattractive appearance. Finally, remove the jars and allow them to cool gradually.

Australian Passion fruit pulp is in steady demand nowadays in America and England. The method of preparation just described is for preservation of pulp on a small scale for domestic use, but preservation in commercial quantities is similar in general principle.

Is Bud Selection Necessary?

H. N. Wicks says "Yes."

(To the Editor.)

Sir,—In a recent issue of "Fruit World" is published an item under the title "Is Bud Selection Necessary," in which Mr. Wickens, Western Australian Government Horticultural Instructor, quotes the Journal of the Royal Horticultural Society, as having published data which is very confusing to the believers of Bud Selection.

In reply to this article I would like to ask Mr. Wickens several questions, as I have not been able to get hold of a copy of the journal in question, and therefore must confess to ignorance of its contents outside those quoted by your correspondent.

In the first place, how were the parent trees selected for the tests mentioned, as the fact is mentioned that the tests were commenced in 1913.

If this were so it would not be possible to have the parent trees, under the conditions which such parent trees should be selected, unless they had been through at least three elimination tests, which means that this alone would have taken not less than nine years' prior to 1913.

Can Mr. Wickens state whether the trees which had been used for parents had been subjected to any such tests or whether they had been merely selected as having a good record for bearing?

If the parents were not selected by the method I have mentioned, then the trials prove conclusively that the necessity of elimination tests, or in other words, **bud selection under the proper conditions, is absolutely necessary,** as the results show that the first buds from a so called parent tree throw inferior trees the first time; but how many inferior trees were thrown and how many showed an improvement is not stated, but this fact is the crux of the whole position.

Under proper conditions the tests should have gone on from here, and the trees mentioned should have been discarded at the stage in which the tests were made, and if there were no trees thrown from this parent which showed a marked improvement on the parent itself, then the parent would have proved itself unworthy of the title, and have been discarded.

This stresses the point that under existing conditions, nurserymen, although trying to obtain buds from **proved fruiting trees.** and a very necessary thing too, are merely taking the first step in a very long ladder, and their results, although aimed at being an advantage, are in no way certain or conclusive.

Of course the above facts are written on the assumption that the parent trees in question were merely selected from trees which had an individual record for good bearing, and I consider this to be most likely, but if the trees had been subjected to tests for a number of years, and the culls eliminated, I would be very pleased to hear just how such tests were carried out, and certainly must have this matter in detail before I will change my attitude towards the matter in question.

Looking at the matter from a broad one of general commercial facts, we have, on the one hand, a Horticultural Society placing some facts before the public, and on the other hand we have the organised Prune growers of U.S.A. stating as a positive fact that in one line alone, the increased business resultant from careful and systematic bud selection, runs into astounding figures each year.

Now I ask you to consider in an impartial way the sources of each of these statements, and leave it for thoughtful consideration as to which carries the most weight from the proper standpoint, viz., the commercial

Yours, etc.,
H. N. WICKS.
Balhannah Deciduous Nurseries,
Balhannah, South Australia.

ADVERTISING AUSTRALASIAN FRUIT IN ENGLAND.

South African Criticism.

To stimulate the demand for Australian and New Zealand Fruit, the National Federation of Fruit Trades in England conducted an advertising campaign, deducting ½d. per case for this purpose.

Some striking posters were designed and displayed in conspicuous places.

The "South African Fruitgrower," commenting on this matter, suggests that poster advertising is not the most effective or economical way of advertising: they prefer the system adopted by the South African Fruit Exchange, which was to enclose attractive "price tickets" in every case

Each "price ticket" was in itself an advertisement for fruit-eating. By providing a space for the prices to be marked, the retailers displayed these cards freely in their windows, thus obtaining a good advertisement for fruit in the very stages in which it could be purchased

BUNCHY TOP IN BANANAS.

Grant for Research Work.

Federal Offer of £1,500.

To enable the Institute of Science and Industry to investigate the eradication of "bunchy top," the disease which is doing considerable damage to Banana plantations in parts of New South Wales and Queensland, the Federal Ministry has decided to make a grant of £1,500. The grant has been offered conditional on the States of New South Wales and Queensland each contributing a similar amount for the work.

During July a deputation, consisting of several members of the House of Representatives, urged the Minister for Customs (Mr. Chapman) to take steps to endeavour to eradicate the disease, and the opinion was expressed that a reward should be offered for a cure for "bunchy top." Under the Ministry's proposal a sum of £4,500 will be available for the work, if the two States agree, and this, it is stated, will be sufficient to enable the investigations to be carried out.

GLUT OF PINEAPPLES.

Plight of Queensland Soldier Settlers.

Government Action Condemned.

The winter crop of Pineapples grown by soldier settlers at Beerburrum (Q.) totals over 40,000 cases. The State cannery cannot handle more than 15,000 cases, even at the low price to the grower of 2/9 per case. It is feared that over 25,000 cases will be left to rot.

The soldier settlers affirm that they were induced to settle on this land by Government pamphlets, which stated the State cannery would provide an outlet for the whole of the crop.

The Brisbane market is glutted with Pineapples, and, to add to the settlers' troubles, the sustenance allowance which they had been receiving from the Queensland War Council has been stopped. Some settlers are now in a desperate plight. There are more than 330 settlers at Beerburrum.

Deputations have been organised to wait on the Premier (Mr. Theodore) in connection with these matters.

Who Sent This?

We have received through the post envelopes containing postal notes for subscription to the "Fruit World." The envelope bears the Yanco, N.S.W., post mark, dated July 2nd. As no covering letter was included the management would be glad to hear further from sender of this remittance.

Specimen of one of the Posters used in England in the recent Fruit Advertising Campaign.

Citrus Growers and Melbourne Agents.

A Regrettable Misunderstanding.

It is to be hoped that the breach between the Executive of the Victorian Central Citrus Association and the Melbourne Commission agents will soon be healed.

The present misunderstanding is causing loss this season, and is tending towards greater market dislocation next season when the 1924 citrus crop should be much heavier than the 1923 harvest.

For the handling of the 1922 citrus crop certain Melbourne agents signed an agreement with the V.C.C.A., but before even a few weeks were passed, it was realised that several clauses of this Agreement, whilst all right on paper, were unsatisfactory to all parties concerned. When the season ended, these disabilities were aired, and agents requested an opportunity of consulting the Citrus Growers' Conference to discuss the matter and suggest improvements. Here a hitch occurred. A committee of the distributors sought to confer with the growers to explain certain matters in detail, but they state they were denied this privilege and were told they could only "make a statement."

On the other hand the V.C.C.A. Executive state that the idea of the distributors conferring with the growers was not "put up" to them, though they admit the idea was that the distributors' delegate should simply make a statement to the Conference.

Looking back it seems that a little tact would have prevented the impasse. Since then the breach has widened.

Both sides deny that they are fighting each other, but the fact remains if it is not a state of war, at least it is not peace and harmony.

For the handling of the 1923 crop two Melbourne agents renewed the agreement, and later two other firms signed up.

We hold no brief either for the agents or the V.C.C.A. Executive, but we must say that it is a pity a hitch has occurred. Fruit marketing is a specialised business, and it needs a man with long experience in order to be successful. The experience of the Melbourne Wholesale Fruit Merchants' Association should not be lost to the growers, but should be availed of. Surely a compromise of some description is possible. Improvements in marketing are possible, and will only be made as producers and distributors meet and mutually discuss the problems.

In private life there are friendly and happy personal dealings between many citrus growers and their wholesale agents. Growers are quick to recognise and esteem men of capacity and business integrity.

Officially, however, there is a breach, and the sooner an understanding is arrived at the better for all concerned.

In the meantime the grower has to consider whether or not he is receiving the full market value for his fruit, as market congestion caused through diverting the fruit into narrow distributing channels is liable to cause sales to be made at less than the legitimate market price.

A prominent grower (an earnest worker for co-operation) puts it this way—"The function of the Citrus Association lies not in selling the fruit, but in regulating the agents, which comprise a trained and experienced organisation.

The energies of growers, instead of fighting the agents, could be better directed in—(1) Propaganda and publicity, (2) standardisation of quality, (3) honesty of pack, (4) regulation of supplies on the market, (5) exploitation of overseas markets, (6) establishing of central packing houses, and (7) the elimination of the individual pack."

Supplies of citrus fruits are now being drawn from the other States, which, but for the present misunderstanding, would not come on to the Melbourne market.

And there is next season to be thought of with probably a bumper crop.

The times call for a sane, long-sighted, hard-headed review of the situation in the interests of the man who needs consideration at all times, and especially just now—the grower.

The V.C.C.A. is a splendid organisation and has a useful career in front of it. Why should not a committee of the agents and a committee of practical growers go into the matter and mutually draw up an independent report?

WESTERN AUSTRALIA.

Bridgetown.

The quality of fruit produced at Bridgetown this season has been excellent. Many returns are to hand for the export season, and, whilst in many instances the pre-war prices were received in London, the freight and other charges make the nett returns unsatisfactory to growers. The "Blackwood Times" publishes details of account sales for the "Ballarat" shipments—80 cases at 11/3, £46/2/6, sea-freight (£18/9/-), insurance, exchange, commission, advertising, etc., £39/18/9; balance, £16/3/9. But there are many returns less than the foregoing. The average returns are disappointing, but there are, of course, a few exceptions where the growers have cleared 4/- per case on rail.

Passenger (impatiently): "Say, guard, can't you have this train run a bit faster?" Guard: "I've been on this line 15 years, and——." Passenger: "Great Caesar! At what station did you yet in?"

JAVA SUGAR PRODUCTION.

Consul Parker W. Buhrman, Soerabaya.

The total production of Java sugar for the years 1916 to 1922, together with the yield of sugar per acre, as compiled by the experimental station at Passoeroean, Java, is shown to be as follows (states a report from the U.S.A. Bureau of Markets):—

Production of Sugar in Java.

Years.	Piculs.	Long tons.	Pounds per acre.
1916 . . .	26,389,173	1,630,000	9,224
1917 . . .	29,502,636	1,822,000	10,118
1918 . . .	28,791,645	1,778,000	9,715
1919 . . .	21,633,525	1,336,000	8,648
1920 . . .	24,998,263	1,544,000	8,813
1921 . . .	27,285,575	1,685,000	9,411
1922* . . .	29,172,006	1,802,000	9,964

*Estimated.

Dennys, Lascelles Ltd.

509 COLLINS STREET, MELBOURNE

Head Office and Wool Stores at Geelong.

Exporters of Fruit

to the Oversea and Interstate Markets.

The Sugar Question.—In the annual report of the Metropolitan and Districts Fruitgrowers' Association (Vic.) the following appears:—"After years of battling, we are glad to be able to state that the present agreement will not be renewed, also that the price will be reduced. In spite of all arguments used, the high price in the past has interfered very considerably with our industry, both on the local market and in the export trade."

"FRUIT WORLD" ANNUAL.

Available Early in August.

Subscribers are asked to note that the publication of the "Annual" has been delayed till early in August.

The "Fruit World" "Annual" and our other works are now being printed at the Horticultural Press Pty. Ltd. In changing over from previous printers, a slight delay occurred.

Copies of the "Annual" will be posted to subscribers in a few days' time.

The New Zealand Fruitgrowers' Federation

Important Decisions: Fruit "Control Board" approved: Compulsory Standardisation Desired.

THE SEVENTH ANNUAL Conference of the New Zealand Fruitgrowers' Federation was held at Wellington, June 13 to 15. Mr. A. M. Robertson, Hawke's Bay, presided, in the absence of the President, Mr. T. W. Attwood, who is in England on business for the Federation.

The following delegates were present, states the "New Zealand Fruitgrower":—Messrs. J. C. Angus, F. Firth, C. D. Shuttleworth, G. A. Green, W. G. Williams, H. S. Izard, H. Paltridge, R. H. Travers, H. Beecroft (Auckland); Messrs. W. D. Southcott, J. P. Boyle, R. Paynter, A. L. Baumgart (Hawke's Bay); Mr. T. F. Conway (Manawatu); Messrs. F. E. Nottage, C. H. Mackay, A. McKee, Colonel Gray, J. Hunter, H. B. Everett, J. Allan, T. C. Brash (Nelson); Mr. W. D. Sanders (Marlborough); Messrs. F. Cone, J. Allison, J. McLeod, F. A. Stead (Canterbury); Messrs. J. Bennetts, H. Turner C. Weaver J. H. Waight, J. Lind (Otago). The President of the Horticulture Division, Mr. J. A. Campbell, the Assist Director-General, Mr. F. S. Pope, the Assistant-Director of the Horticulture Division, Mr. W. G. Goodwin, were present as well as the following instructors: Messrs. W. H. Rice, C. Craigie, W. C. Hyde, G. Stratford, J. H. Thorpe, and B. G. Goodwin.

The Conference was opened by the Minister for Agriculture, Hon. W. Nosworthy.

Annual Report.

In the Annual Report and Balance Sheet, which was presented by the Chairman, it was stated that the two matters of vital interest to the fruitgrowers of New Zealand, and which made export possible, were (1) the renewal of the Government guarantee at 11/-, and (2) the securing of advances from the Bank of New Zealand and the allocation of all refrigerating fruit space. Another factor which tended to the more satisfactory working of export was the adopting of new branding regulations, and the issue of a universal label. The success of this was mainly due to the efforts of Mr. J. A. Campbell Director of Horticulture, working in conjunction with the management.

The season's exports totalled approximately 140,000 cases. The Committee had drafted regulations for compulsory standardisation, which were submitted to the Government to be made compulsory. The standardisation of fruit cases was finally brought into operation, and had given satisfaction.

The Trading Department showed considerable progress. It needed the loyal co-operation of growers. The gross turnover was £7,000, and the nett profit £227. The cordial relations existing between the Department of Horticulture, shipping companies and the Federation management, assisted to put the Federation in the strong position it held. The balance-sheet shows £1,919 received from the 1922 orchard tax, which was economically administered by the Federation.

The Chairman stated the representative in South America, Mr. Tate, appeared to be making good. Without a renewal of the Government guarantee it would be impossible to conduct the export trade.

The Report and Balance-Sheet were adopted.

Imperial Preference.

The Hon. C. J. Parr (Minister for Public Health and Education) briefly addressed the Conference. It was pointed out to him that New Zealand growers were exporting their fruit to England, where they had to meet the keenest competition from other countries. New Zealand fruit were admitted into England on exactly the same terms as American, and it was felt that to keep trade within the Empire our growers were entitled to some sort of preference over foreign countries.

The Minister said he was a strong Imperialist, and believed in keeping trade within the Empire by all possible means. He promised to bring the matter before the Prime Minister who, he had no doubt, would give it his sympathy and support at the Imperial Conference.

Cool Storage Problems.

Mr. Waters Biological Division, presented an interesting report dealing with his visit to Australia to collaborate with the English expedition of Scientists.

Fruit Control Board.

Mr. T. C. Brash moved, on behalf of the Executive—"That this Conference urges the necessity of a Fruit Export Control Board, and urges the Government to pass the necessary legislation." At the present time the Federation had certain compulsory levies as income, but they had no power in dealing with the grower. That was the trouble. In moving for this Control Board, he made it perfectly clear they were not proposing a marketing scheme.

Mr. Brash agreed to delete the word "export" from the original proposal.

Mr. F. E. Nottage (Nelson) seconded the amendment, deleting the word "export." He said growers have nothing to lose and everything to gain by placing their affairs in the hands of a National Board, who could handle the whole business.

Mr. Allen (Nelson) said they had reached a stage of over-production so far as the local market was concerned. If Nelson this year had put on the local markets the 94,000 cases sent overseas, what would have been the result? The proposed Board could formulate a standardisation distribution scheme, but should never interfere with the freedom of the individual orchardist on the local market.

Mr. Turner (Otago) considered that a Control Board would be more in the direction of finding a market for fruit than getting control of it.

To draft a concrete proposal, the following Committee was appointed —Messrs. Firth and Paltridge (Auckland), Allan and Nottage (Nelson), Cone and Stead (Canterbury), Brash (Wellington), Southcott and Baumgart (Hawke's Bay), Turner and Weaver (Otago), Conway (Manawatu), and Sanders (Marlborough).

Special Committee's Report.—Subsequently Mr. Nottage, on behalf of the Special Committee, reported as follows:—

> "That in the opinion of this meeting a fruit control board should be set up, or as an alternative, the Fruitgrowers' Federation given the necessary powers, to take control of the local market of standardisation, marking and advertising, and so far as export is concerned, the Board or Federation to have control of shipping, advertising and insurance, also decision as to which ports or countries the fruit is to be shipped. Such body to have power to make a levy on all pip fruit sold either locally or exported."
>
> "This Conference urges all representatives to immediately consult the growers in this respective provinces with a view to securing their approval and taking the necessary steps to obtain the requisite legislation during the present session."

Mr. Nottage said the Committee did not contemplate complete control or price-fixing, but only control over those matters which could not be administered except by a properly constituted board. Uniform marking was necessary, also advertising.

Mr. Allen (Nelson) said if standardisation were made compulsory, and not kept up to the work, the system would fall into disrepute. He

favoured a control board of business men, using the Federation to carry out its wishes.

Mr. G. A. Green (Auckland) said he personally considered they should have a board of control comprised of three prominent business men, who did not necessarily know anything about the fruit business, together with a representative of the Federation and the Government.

Colonel Grey (Nelson) said the idea of this Board of Control was not designed to interfere with someone else, but to ensure some definite position for the industry. Instead of having a board comprised of business men Federation representatives and Government nominees, he put forward a plea for a board of specialists. During the war it was not until the specialist was brought in to do special work that anything but disaster occurred. **Specialists in transport, finance, marketing, and scientific research** would be needed on a board such as he had in mind, and its head a Chairman who need not be an expert on any of these things, provided he had some powers of organisation. There was much hard work to be done, but when the board was set up it would have to move cautiously, and obviously was not going to rush in and do anything against the general interests of the growers of the Dominion.

Mr. Brash said the report was a compromise, as there were differences of opinion. The difficulty lay in the fact that they had to deal with local markets. They would never have the power to fix the price of fruit, and Parliament would never give authority for them to deal with the local markets in any way that would penalise the local consumer.

It was proposed to leave the actual marketing both with regard to export and local fruit outside the activities of the Board. One penny per case would bring in £4,000, which might do away with the orchard tax, which was a diminishing quantity.

Mr. Green (Auckland) moved:

> "That the principle of a control board be approved, including an outside body of experts, to carry out the recommendations now before the Conference."

Mr. Everett (Nelson) said his Association would not support a board comprised of the federation directorate. This was not a personal matter, but they favoured a separate board comprised of good hard business men.

Mr. Becroft (Auckland) favoured a board of the best business men procurable. They did not want fruitgrowers to manage the business.

Mr. Mackay (Nelson) also favoured a separate Board. The Nelson growers had lost faith in any organisation controlled by the growers alone.

Mr. Gilbert (Nelson) moved as an amendment: "That the Federation be vested with the powers necessary, including calling in any outside assistance required to give effect to the majority recommendations of members of the Associations of New Zealand, and that the maximum levy be one penny per case."

The vote was equal—16 for and 16 against. The amendment was declared carried on the casting vote of the Chairman.

It was decided by delegates to place the whole matter before the growers in their respective districts, and endeavour to get their support to the principle of control, as recommended in the committee's report. The decisions from the different districts are to be reported to Wellington at the earliest possible moment in readiness for a definite scheme to be outlined to carry these recommendations into effect.

F. W. MOORE & Co.
LIMITED
Clarence House
Arthur Street, London Bridge
LONDON E.C., 4, Eng.

We are the largest receivers of Green Fruit from Australia, our consignments having steadily increased annually since our business was established in London in 1902. Our Managing Director has had the handling of consignments to the markets of Great Britain and Europe since 1900, and personally supervises the sale of all fruit consigned to the Company. Fruit is placed for sale in whatever markets or way (auction or private) appear most suitable, thus getting it before all classes of buyers; our increasing consignments demonstrate the success of this practice.

F. W. J. MOORE,
Managing Director.

Telegrams: Tirralirra London

Bankers: Bank of New South Wales.

Voluntary or Compulsory Standardisation?

Mr. J. A. Campbell, Director of Horticulture, explained the scheme for voluntary standardisation, which included the packing of fruit to the grades outlined by the Department, and affixing to the case a special sticker indicating the grade packed. The broker's part was to display the standardised fruit separate from the unstandardised. The Department would inspect the standardised fruit to give assurance to the public that it was true to label. The buyer's part, it was hoped, would include the consistent purchasing of standardised fruit to do away with previous dissatisfaction and loss which had previously attended the purchase of fruit of lower quality.

Mr. Press, representative of the Wellington Fruitgrowers' Association, said the auctioneers were heartily in accord with Mr. Campbell's scheme. In his opinion it was necessary to have compulsory standardisation, control of supplies and a pooling of the results.

A vigorous discussion ensued, many delegates favouring compulsory standardisation. The Chairman moved—"That this Conference thoroughly approved of the scheme put forward by Mr. Campbell and volunteers to do all in its power to give it full support." Seconded by Mr. Allen, and carried unanimously.

The Principle of Compulsion.

A resolution was subsequently carried, on the motion of Mr. McKee—"That Conference support the principle of compulsory standardisation, and that minimum grades be defined by new regulations, such regulations to be framed hereafter." The motion was carried without dissent.

Black Spot on Apples.

The following resolution from Marlborough was carried without discussion—"That black spot allowance be reduced to the size of a sixpenny piece on Apples and three inches and over, and to the size of a threepenny piece on smaller sizes.

Advertising Fruit.

Delegates expressed a keen desire to carry out an advertising scheme. A Committee was appointed to advise ways and means for putting an advertising scheme into operation immediately, the Committee appointed to consist of Messrs. McKee, Baumgart, Campbell, the Secretary of the Wellington Fruit Brokers' Association, Mr. Harvey Turner and Mr. Radley, with power to add to their number.

Export Guarantee.

Conference adopted a resolution requesting the Government to renew the guarantee of one penny per lb. on export Apples and Pears.

Standard Fruit Cases.

It was decided that the size of the standard cases for stone fruit should be 6 x 6 x 28.

Modern Dehydration.

It was decided, on the suggestion of Mr. Weaver, to have inquiries made regarding dehydration of Apricots and Apples.

Charge for Cases.

Conference affirmed the principle of a Dominion charge for fruit cases, viz., 6d. per bushel case, and 4d. for half bushel.

Fire Blight.

A resolution was adopted requesting the gradual elimination of Hawthorn from all fruit growing areas.

Several railway problems were dealt with, and other resolutions were carried, including

An alteration of the Government definition of cider, allowing non-alcoholic cider to be sold.

The sending of a capable man to America to inquire into the methods of turning waste fruit to profitable

That all spraying materials be sold under a Government guarantee.

That no duty be charged on fruit trees or stocks imported for the purpose of obtaining new varieties.

That protection be afforded to raisers of new varieties of fruit.

That the question of assisting in the collection of orchard tax by the Associations be considered, and the best means to deal with defaulters.

Matters relating to export fruit were dealt with, including the request that a special Overseas Fruit Carriage Committee be constituted to investigate the problems of ships' cold storage, the committee to consist of a biologist, a chemist, a consulting refrigerating engineer, an engineer or manager of the Dominion Fruit Cool Store, together with the Director of Horticulture. Other export matters related to the grading regulations, shipping facilities, and varieties.

Dr. C. J. Reakes, Director of Agriculture, in a brief address, said the present problems of the industry centre around marketing.

Conference decided that the Federation should aim at developing the South American market, also the consigning of Apples and Pears to South Africa and to the East. The matter of requesting a duty on imported fruit was referred to the Directors. The present duty is 1d. per lb. and 1½d. on American fruit. In other words, 3/4 on Canadian Apples, and 5/- on American.

Downy Mildew. — Mr. Williams moved that owing to the possibility of downy mildew and other vine diseases being introduced into the Dominion by the importation of overseas Grapes an embargo be placed on such importation.

The Director of Horticulture, Mr. Campbell, said downy mildew was recognised as one of the most dangerous diseases of the vine. It was controllable, and the import of Grapes themselves did not cause much risk. The disease could also be conveyed in Raisins, and they could not ask for the prohibition of these. An embargo on Grapes would lesson the risk, but it would not guarantee that they could keep the disease out. Australia admittedly was not treating New Zealand very liberally, but if anything like retaliation started it might spread. Embargoes required to be fairly gingerly handled, and should not be adopted except as a last resort. The resolution was carried unanimously.

Duty on Australian Grapes and Cherries.—Another resolution from Te Kauwhata asked for an increase in the duty on Australian-grown Grapes and Cherries. It was explained that there was a duty of 2d. a pound on Cherries, and Mr. Firth said it cost about 1/- a pound to land them in Auckland from Australia. Mr. Bennetts, on the other hand, was strongly in favor of an embargo to encourage Cherry production in Otago. This drew a remark from Mr. Nottage that a landed cost of 1/- a pound was adequate protection for any industry. Mr. Bennetts had objected to an embargo on Australian trees coming into New Zealand, but wanted one to keep out their Cherries.

The motion was lost by a big majority.

Matters relating to orchard hygiene, including the Mealy Bug pest,

Gerald DaCosta

G.D.C. SQUARE DEAL BRAND

Head Offices—
5 and 7 Eastcheap,
LONDON, E.C. 3

Importers and Distributors of all kinds of English, Colonial and Foreign Market Produce

BRANCHES:
Covent Garden, London, W.C.2. Tel. Gerrard 865. Telegrams, "Geracost, London."
Spitalfields Market, London, E. 1. Tel. Avenue, 8804. Telegrams, "Spitacost, London."
3, 4 & 5 The Arcade, Borough Market, London, S.E. 1. Tel. Hop 3373. T'grams "Borocost, London."
G.N.R. Potato Market, King's Cross, N.1. Telegrams, "Kincrocost, London."
3-5 Pudding Lane, Monument, London, E.C., 3. Tel. Avenue 7990 Telegrams, "Fruits, London."
18 Stanley St., Liverpool. Tel. Central 888. Telegrams, "Geracost, Liverpool."
Southampton Docks (Facing No. 45 shed). Tel. Southampton 2207. Telegrams, "Geracost, Southampton."
Amercian Branch, 202-4 Franklin St., New York. Cables, "Geracost, New York."

and the menace caused by abandoned orchards were dealt with.

Election of Directors.—The three retiring Directors were Messrs. Allan, Brash and Bennett. On a vote being taken, Messrs. Allan, Brash and Turner were returned.

Several votes of thanks were carried, and the Conference closed.

The satisfaction you get out of doing good work will be multiplied if you know that, in doing it, you are contributing to the comfort or welfare or happiness of another soul.

Victoria.

VICTORIAN FRUITGROWERS' CENTRAL ASSOCIATION.

The monthly meeting of the Executive of the above Association was held on July 17th. Mr. V. R. McNab occupied the chair.

Railway Fruit Stalls.—The Secretary reported that the Railway Commissioners had decided to erect kiosks for selling fruit at the leading city railway stations, in addition, small hand carts would be used for the sale of fruit on the trains.

Faulty Carriage of Pears.—Mr. J. Tully stated that with other growers he had interviewed the captain and engineer of the "Surrey," which took Pears to London. They stated same had arrived in excellent condition, and were surprised to learn that the account sales had reported fruit was running out of cases and unsaleable.

Mr. Thiele (Doncaster) said that it was difficult to understand why Pears picked from the same trees and packed by the same packers, and forwarded in the same ship, should realise such widely divergent prices, which ranged from 1/3 per case to as high as 27/- per case.

After considerable discussion, Mr J. Bailey (Narre Warren) moved, and Mr. J. H. Lang (Harcourt) seconded, a resolution, which was carried, that a special meeting of growers should be held during the forthcoming show week to discuss the whole of the shipping and export business.

Railway Freight.—A letter was received from Mr. Miscamble in regard to freight on export fruit consigned to one or more shipping agents was received.

Fruit for export, when consigned in a quantity of not less than 95 per cent. of the capacity of the vehicle used for its conveyance, is carried at the agricultural produce rate, but that when forwarded in smaller quantities of not less than three tons per consignment each lot is then charged at special agricultural produce rate, which rate, however, is only slightly higher than the truck load rate, as will be seen from the following table:

Mile-age	Truck Load Rate A.P.Class Per ton	3-Ton Lots L. & P.Class Per ton	Amount of Difference Per ton	Difference per Cs.Fruit
50	7/	8/4	1/4	.3
75	9/6	11/4	1/10	.5
100	10/10	13/8	2/10	.8
128	12/2	15/	2/10	.8
150	12/10	15/10	3/	.8

The lower rate is granted to full truck lots as an inducement to have the traffic forwarded in such quantity as one consignment. It would be inequitable to specially exempt the export fruit traffic from this provision.

Advertising Fruit.

A letter was received from the Tyabb Fruit Growers' Association which urged "that the Central Asso-

ciation be requested to approach the parties concerned, and endeavour to arrange that in consideration of the fruitgrowers contributing 0½d. per case for advertising the sale of fruit in London a minimum selling price be fixed which will ensure the fruitgrower a profit.

In support of their suggestion, the following reasons were put forward:

1. That as fruitgrowers pay towards improving the English market for Apples, they should share in the benefits obtained through advertising. All other branches of the trade—agents, distributers and retailers—get ample profits, whereas in many cases growers sustain a loss.

2. That in consideration of the fruitgrower bearing a part of the expense of stimulating the demand for his products and benefiting the trade of the sellers, he should be assured of a reasonable return for his fruit.

Mr. J. H. Lang (Harcourt) gave notice that it was his intention to bring up at a later meeting a suggestion for an amalgamation of all the fruitgrowing interests, and in furtherance of this, suggested a reconstruction of the General Executive. The time was now ripe for this. Citrus and other sectional interests should all be combined, and speak as one body, and as a whole, on matters affecting the industry, while allowing each sectional interest to manage its own affairs.

VICTORIAN BERRY FRUITS.

Growers in Conference.

The Annual Conference of the United Berry Growers' Association was held at Lilydale (Vic.), during July. Mr. W. C. E. Jones (President) occupied the chair. About sixty growers attended.

In opening the Conference, Mr. W. H. Everard, M.L.A., stated that by proper organisation the whole of the berry crop could be profitably sold. He urged growers to refrain from plunging into expensive distribution schemes.

The Annual Report was read by the Secretary, Mr. R. A. Routley, and adopted.

The proposed constitution was discussed with animation, and eventually referred back to the Executive.

Affiliation Fee.—The Executive proposed that the affiliation fee be 5/- per member. The Chairman explained that this fee would in future be devoted to the work of the U.B.G.A. instead of the Central Association, and that the affiliation to the latter body would be by the U.B.G.A. joining as a company.

It was subsequently decided, on the motion of Mr. L. Bunt, seconded by Mr. R. W. Fulton, that the fee be 10/- per member.

On the motion of Messrs. Dunbar (Mt. Dandenong) and Garth (E. Wandin) it was decided that only district societies could join the U.B.G.A., not individual members.

The Season's Prices.

Last season's prices were reaffirmed for the coming season, as follows:—

(Per Doz. Lbs.).

Strawberries	7/
Raspberries	7/6
Loganberries	5/
Blackberries	5/
Gooseberries	3/6 & 3/
Red Currants	6/
Black Currants	12/

Cape Gooseberries, per lb, 9d.

The price to the consumer will be as above, plus the cost of freight and delivery.

The following office bearers were elected:—

President, Mr. W. C. E. Jones; Vice-President, Mr. J. Valantine; Secretary, Mr. R. A. Routley; Treasurer, Mr. H. Blanksby; Committee (two delegates from each Association), Messrs. W. R. Hayes and A. E. Child (Mount Dandenong), H. Blanksby and F. Budden (East Wandin), T. Sebire (Wandin), E. J. Mattingley and E. Thompson (Silvan orchardists), F. Macarthy and L. Armstrong (Monbulk), G. H. Payne and H. L. Read (Seville), C. Exton and G. Coller (Kinglake); Auditor, Mr. Denton.

Distribution Scheme.—The Chairman outlined a distribution scheme, similar in most respects to that adopted by the Household Supplies Co. Pty. Ltd., but under the direct management of an experienced grower. Estimates of costs were submitted, showing a possible loss of £192 if 130 tons were handled, and a profit of £100 if 200 tons were handled.

Mr. Coller (Kinglake) urged that distribution be conducted through the Housewives' Association.

It was decided to refer the scheme back to the Executive for further consideration.

Railway Freight.—On the motion of Messrs. Coller and Exton (Kinglake) it was decided to request the Railway Department to carry fruits at a flat rate.

Housewives Assist Distribution.

The Housewives' Association of Victoria is prepared to co-operate with growers of berry fruits. With a membership of over 80,000, the Association is prepared to notify its members of the time the berry crops are ready, and to place women desiring the fruit into touch with the growers for direct business.

This appears to be an opportunity which might with advantage be developed by the berry growers.

STATE FRUIT BOARD.

A meeting of the Victorian State Fruit Advisory Board was held at Melbourne on July 17. The Assistant Minister for Agriculture (Mr. Pennington) presided.

Marketing Fresh Fruit.—The Sub-Committee presented a report recommending the amendment and enforcement of market regulations; that owing to the "high retail prices and low returns to the growers, a Royal Commission be appointed, preferably a citizen with legal training, unassociated with the fruit industry to inquire into and report upon the whole question of the distribution and marketing of fruit in all its aspects."

The recommendation was received, and listed for discussion at next meeting.

Shipping Fruit. — Another Sub-Committee submitted an interim report upon the handling, shipping, and stowage of fruit. This set out that provision for standardisation and regulation of both export and local trade would prove to be advantageous. Further, the Committee recommended that the Ministry be asked to legislate along those lines. It was considered that penalties should be imposed upon persons who failed to handle fruit with reasonable care. Consideration of the report was deferred.

METROPOLITAN FRUITGROWERS' ASSOCIATION.

Annual Meeting.

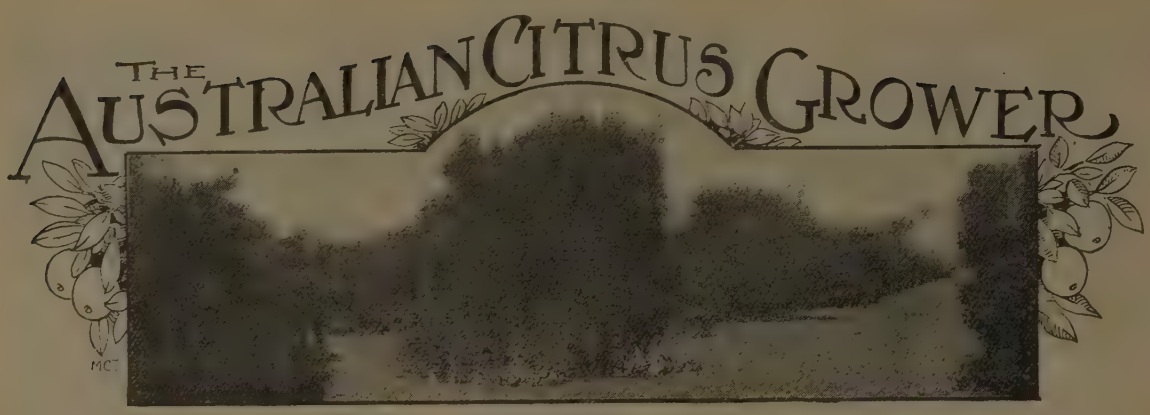
The annual meeting of the Metropolitan and District Fruitgrowers' Association was held at Box Hill on July 5th. Mr. J. Jordan (President) occupied the chair.

The annual report stated that the prolonged dry season had greatly interfered with the industry. Membership had not increased as rapidly as had been expected, owing to the apathy of fruitgrowers.

Mr. Johnson (Tally Ho) said that open-air markets had been of great value to the grower.

Mr. Everard, M.L.A., regretted that growers had not "stuck out" for the markets as they should have done. During the past year 40,000 cases had been disposed of at Kerb Markets: that quantity could easily be trebled. There were 2,000 returned soldiers engaged in the fruitgrowing industry; they had received land from the Government, and they owed it money. If they could not find markets for their fruit their plight was bad, indeed. A system was wanted that would provide for a central city market, where the public could buy Apples by the case. In the suburbs, nine out of 10 housekeepers did not have a pound of fruit in the house. The Association had done good work in pushing the sale of fruit and in protesting against the continuance of the "sugar agreement."

The following officers were elected:—President, Mr. J. Jordan; Vice-President, Mr. J. Tully, senr.,; Executive, Messrs. J. Stevens, R. C. Fankhauser, H. Clay, F. E. Johnson, and A. R. Fankhauser.



Fumigation of Citrus Trees

Potassium Cyanide Method Superseded.

Successful Tests with Calcium Cyanide.

By Keith C. McKeown.

THE VISIT of Professor H. J. Quayle, Entomologist of the University of California, to Australia, is one which should prove of the greatest interest and importance to the fruitgrowers of Australia, since he is introducing a new method of combating Scale pests, and in particular Red Scale, which is one of the greatest pests the citrus orchardist has to fight, writes Mr. Keith C. McKeown.

The method in use—fumigation with Calcium Cyanide—although new to Australia, has been in use for some years in California, where Professor Quayle evolved this new method of fumigation, and has carried out exhaustive experiments, which have been attended with notable success, not only in the control of scale insects, but also for the destruction of Aphis on Melons and Thrip on Onions; also as an efficient soil fumigant.

Professor Quayle has spent four months on the Murrumbidgee (N.S.W.) Irrigation Areas during the last season, carrying out experimental work under local conditions, and I desire to express my appreciation and thanks to him for his courtesy in supplying me with full particulars and giving me every opportunity of seeing the work carried out and keeping track of his experiments.

Fumigation with Calcium Cyanide supersedes the old method, which is at present that generally in use, i.e., Potassium Cyanide, Water and Sulphuric Acid. The finely powdered Calcium Cyanide is produced in Canada at Niagara Falls by the American Cyanimid Co., of New York.

Once again fruitgrowers are indebted to Mr. K. C. McKeown for a thoughtful contribution towards the solution of fruitgrowing problems.

Mr. McKeown's previous article in the "Fruit World" dealt with the sterilization of dried fruits by means of dehydration.

New methods of combating insect and fungus pests are being discovered from time to time. The present article deals with the control of scale pests on citrus trees.

Mr. McKeown, who is on the staff of the Irrigation Commission at Leeton, N.S.W., has made a study of entomology, and the results of his investigations are made known from time to time.

Thanks are due to the Water Conservation and Irrigation Commission for providing opportunity for this important work.

—Editor.

The method of treatment is as follows:—The tent or sheet is placed over the tree as in the case of fumigation with Potassium Cyanide; there is not the necessity to place earth on the skirt of the tent. The ground under the trees should, however, be kept clean from weeds, etc., as these allow the gas to escape. The powdered Calcium Cyanide is applied by means of a small distributing machine; in the case of that used during the tests, home made, consisting of a small Buffalo Blower mounted behind a hopper, in which a brush revolves to keep the powder from clogging, and fitted with a small "gate" by means of which the feed can be cut off. From this extends a length of rubber hose. The whole is mounted on a pair of light wheels, and can be drawn by hand from tree to tree. For convenience, a container for the

stock of Calcium Cyanide

and a small set of scales are carried on the truck. The Calcium Cyanide is weighed and the necessary charge placed in the hopper; the end of the hose held under the skirt of the tent and a few turns of the handle of the blower delivers the charge; the fine powder can be seen issuing from the end of the hose like grey smoke. The whole operation occupies only a few seconds. The duration of the exposure of the tree to the gas is the same as for fumigation with Potassium Cyanide—45 minutes. The expeditious handling is in strong contrast to the time occupied in measuring and mixing the materials for each tree inseparable from fumigation with Potassium Cyanide.

The quantity of Calcium Cyanide used per tree is the same as for Potassium Cyanide, but there is no water or acid used; the Calcium Cyanide liberating Hydrocyanic Acid Gas on contact with the air. This, with Sulphuric Acid, is 7/6 per gallon, means a considerable saving alone; besides the fact that the Calcium Cyanide costs 8d. per lb. against 1/7 to 1/9 per lb. for Potassium Cyanide, **giving for an average tree a cost for materials of 3d. as against 10d. in favour of the Calcium Cyanide.** The above costs are calculated on the cost of the materials landed at Leeton, N.S.W. Another fact which must be taken into consideration is that there is

no acid to burn

the tents, and thus shorten the life of the most costly part of fumigation equipment.

There is no doubt that fumigation with Calcium Cyanide can be worked satisfactorily under favourable weather conditions, but fumigation must be stopped on the break of the season. With trees fumigated in dry weather, there was

a complete kill

of the scale, with full dosage, with no injury to the tree, but with trees treated in wet weather, slight leaf drop, which, although not serious, showed that it was time to stop operations with the Calcium Cyanide

and continue where necessary with the "pot method" with the Potassium Cyanide.

Lemon trees proved particularly susceptible to injury if fumigated in damp weather.

Calcium Cyanide is more restricted to favourable weather conditions than Potassium Cyanide. Its use is undoubtedly successful in dry districts under such conditions as prevail on the Murrumbidgee Irrigation Areas and many districts inland—where it will go far in solving Australia's fumigation problems.

Further experiment is necessary to prove if it can be satisfactorily applied in the humid coastal districts, but even there in dry seasons it should be effective.

EXPORT OF CITRUS FROM SOUTH AFRICA.

Some striking figures of the growth of the export trade in fruit from South Africa, given by the Chairman of the Fruitgrowers' Co-operative Exchange of South Africa, show that in 1920 there were exported, 123,000 cases of citrus fruits, being more than double that of 1919. In 1921, 231,000 cases were exported, while the figures rose to close on 300,000 in 1922. Nearly 400,000 cases have been exported this season. The total export of deciduous fruit for the 1920-21 season was 450,000 boxes, for the season 1921-22 it was 816,000 boxes, and the export this season has reached a million. The Prime Minister and a distinguished party were down at the Cape Town docks recently to see the millionth case put on board the "Arundel Castle." South Africa is determined to establish a firm position on the oversea markets.

New South Wales.

Citrus Show.—The Hills District third Annual Show will be held at Galston on September 8th. Everything points to a successful show, as new classes have been added (in addition to the District Exhibit) including case Valencias for oversea export and three cases for packing sheds, and members of the Central Citrus Association only. Entries are promised from Gosford, Kurrajong, Wilberforce, Griffith and Leeton in these classes. An old friend, Mr. F. A. Nicolson, is Hon. Secretary this year, with Major Parker again President.

Appreciation.

Murrabit, Vic.,
30/4/23.

"Enclosed is postal note for 8/6, due as my subscription to your magazine. I am very pleased to be a subscriber to it, and find out that every article is well worth reading and studying."—N. M. B.

Fruit Growing Under Irrigation.

Instructive Pruning Competitions.

By Our Special Correspondent.

Pruning Competitions.

DURING JUNE a series of pruning competitions were held in the Mid-Murray Irrigation Areas in South Australia.

The competitions were held as follows:—Cadell, June 19th; Waikerie, June 20th; Moorook, June 21st; Renmark, June 26th; Berri, June 27th; with the championship at Moorook on June 28th.

Competitions were held with Gordo, Sultana, and Currant vines, Peach, Apricot and Pear trees.

To compete in the Championship competition, competitors who gained the first three places in the vine and tree sections in each of the five district matches were eligible, provided they had gained 75 per cent. of the total points and certificates in at least two classes.

Certificates of competency were awarded in each of the vine and tree classes to each competitor who gained 80 per cent. of the total points.

Mr. C. G. Savage (Deputy Horticultural Instructor) acted as judge throughout the competitions, and was assisted by the following consultative judges: — Cadell and Waikerie—Messrs. Lehmann and Pickering; Moorook and Berri—Mr. W. R. Lewis; Renmark—Messrs. Kateker and Basey; Championship—Messrs. Lehmann and Lewis.

At each centre the judge criticised the work of the pruners, some of the competitors were advised to pay more attention to the condition of their secateurs, as clean work could not be done with faulty shears.

Before commencing to prune any vine or tree an examination of the plant should be made, then remove all large shoots which had to be cut away, the operator could then see how to deal with the rest of the tree or vine in a satisfactory manner. Competitors were advised not to hesitate but to make up their minds quickly, as the judges were apt to think that the man who was slow in deciding where to make the next cut, did not understand his work.

Throughout the whole of the competitions many points were lost, because of dirty work; this included faulty cutting, failure to clean up large saw cuts, and the non-removal of dead wood. Faulty cutting was due to carelessness, and to pruning shears not being properly adjusted.

In dealing with the leaders of trees, pruners do not show enough discretion, many leaving leaders unstopped that should have been cut hard back, while other leaders that were cut could have been left long. Weak and strong leaders on the same tree were at times both cut irrespective of strength, the weak ones should have been cut back hard, and the stronger ones left longer. The unstopped leader should only be applied to trees which are vigorous, those which it is desirable to stimulate should be cut hard back.

Again, many competitors failed to aim at building up the tree against the wind, but turned the leaders in such a way as would tend to build the tree out with the wind.

In the **Peach** class most competitors failed, as proper provision was not made for refurnishing the arms with new fruiting wood. Many were content to simply shorten in the fruiting wood without reducing some of the shoots back to the base buds to force out refurnishing shoots for next season's crop.

In the **Pear** classes the treatment of the fruiting wood was much at fault, with young trees the long lateral growths should be left uncut where they were not too thick, and there was room for them to hang down. These lateral growths are often capped with a flower bud, which would expand in the spring and set a bunch of fruit. As the fruit increased in weight the laterals bent over and the buds behind the bend were forced into small spur growths. These small spurs were either fruit or wood spurs, in the latter case they would develop into fruit spurs the following summer. The laterals, after the desired spurs are obtained, can be shortened in to the required number that it is advantageous to retain.

Vine Classes.

In dealing with the spur pruned Currant and Gordo vines, pruners lacked judgment in treating the fruiting wood, as a general rule the spurs are left with two buds in addition to the base buds.

In some instances growers left the spur three buds long, this was in most cases where the spurs were not strong enough to carry more than two buds. One should treat each spur according to its strength; weak spurs should be cut to one bud only, while the stronger ones are left to two buds.

In selecting the spurs where possible the lower of the two growths arising from the previous year's spurs should be selected, for if the higher shoot were chosen the secondary arm was lengthened unduly.

The use of water shoots for reducing elongated secondary arms was not understood by many growers. The practice should be to reduce a water shoot to one bud where it arose in a desirable position for reducing the

secondary arm. The fruit wood at the top of the arm was retained and pruned to a spur to carry fruit during the coming season. The subsequent winter's treatment being to shorten in the secondary arm to growth arising from the water-shoot spur. This growth should be spurred and the resulting shoots would bear fruit during the summer.

The leaving of spurs on the main stem and on the arms close to the point of subdivision from the stem was condemned. Spurs left in this position had first call upon the sap supply consequently grew strongly, robbing the spurs further out on the arms which suffered in consequence. Spurs should not be left on the arms within 6 to 8 inches of the subdivision.

In the **Sultana** class pruners were advised to

leave more rods

than were required by the vine until they had been twisted on the wires. If only the requisite number of canes

H. M.
WADE
& CO.
Fruit Merchants
Prompt Advices of Sales
—CHEQUES WEEKLY—
435 FLINDERS LANE
MELBOURNE

were left and some were broken in twisting, sufficient fruiting wood was not retained to carry next season's crop. Rods should be twisted close back to their base in order to force the buds at the base into growth, thereby securing fruiting wood close into the arms of the vine.

Spurs should be left to insure a plentiful supply of fruiting wood for the next season.

By systematic placing of the spurs the balancing of the vine could be greatly influenced.

The balancing of the vine by careful arrangement of the canes upon the trellis wires gained points for the competitor.

Twisting of canes across the centre of the vines tended to crowd the centre, thereby blocking out the light which is essential for the proper development of the growths that were necessary for refurnishing the vines.

The use of water shoots as fruiting rods did not tend to give the results one expected, as this type of wood does not carry much fruit.

The following certificates were awarded:—

Cadell.—L. W. Sholl, Apricot; M. Gordon, Peach; G. Priest, Sultana; D. Hall, Currant; W. S. Mudge, Currant, Sultana; S. Davis, Currant.

Waikerie. — J. Boehme, Apricot, Gordo, Sultana; C. Smith, Apricot, Pear, Gordo, Currant, Sultana; T. Taylor, Apricot; E. Miller, Peach, Apricot, Pear, Currant, Sultana, Gordo; G. Perry, Currant; P. McDonald, Gordo; E. Crabb, Sultana; J. Virgo, Currant; W. Perry, Gordo; J. Carpenter, Currant; A. Perry, Gordo, Currant; F. Dunstone, Gordo, Currant, Sultana.

Moorook.—C. Vardon, Gordo, Currant; L. A. King, Gordo, Currant, Sultana; C. S. Bailly, Currant, Sultana; J. Weatherall, Sultana; S. Sanders, Jr., Gordo, Currant, Sultana, Apricot, Pear; M. Girant, Apricot; M. Wachtel, Peach, Apricot.

Renmark.—P. A. Johns, Gordo, Currant, Sultana; R. H. Wescombe, Sultana, Gordo; A. F. C. Strachan, Currant, Sultana; L. A. Darrington, Sultana; H. J. Ruediger, Gordo; F. Hooper, Gordo, Currant, Sultana.

Berri.—L. A. Chapple, Pear, Apricot, Peach, Gordo, Currant, Sultana; A. W. Magarey, Apricot, Currant; W. H. Harris, Apricot, Peach, Gordo, Sultana, Currant; H. W. von Bertouch, Peach, Apricot, Currant, Gordo; A. V. Stidston, Pear, Gordo; R. H. Halliday, Apricot, Peach, Currant, Sultana; L. C. Pennyfield, Peach, Currant, Gordo, Sultana; H. Brand, Currant; A. H. Penny, Sultana; R. Fluris, Gordo; W. N. Ellis, Gordo, Currant; P. M. Wilksch, Sultana.

Championship Competition.

Vine Section. Total Points, 300.

C. P. Smith, Waikerie, 267 points, Sulphate Ammonia Cup.

L. A. Chapple, Berri, 262 points, second prize.

E. Miller, Waikerie, 257 points.

Tree Section. Total Points, 300.

E. Miller, Waikerie, 255 points, Sulphate Ammonia Cup.

L. A. Chapple, Berri, 253 points, second prize.

C. Smith, Waikerie, 250 points.

Canning and Jam Fruits

Pool for Next Season Desired.

Growers Interview Federal Country Party and the Prime Minister.

Growers of soft fruits have made an earnest appeal for Federal assistance for the coming season.

At a conference in Melbourne on July 17th Mr. V. R. McNab (Ardmona) presiding, the necessity for Government assistance was emphasised: the suggestion of a subsidy was considered, but finally a unanimous vote was passed in favor of a "fruit pool" financed by the Federal Government and administered by a board of business men.

Subsequently, under the guidance of Mr. W. C. Hill, M.H.R, a conference between the growers and the Country Party was held, when the needs of the growers were ventilated, and sympathetically received. Details were quoted revealing the extensive programme of plantings under the direction of the Irrigation Commissioners of South Australia, Victoria and New South Wales.

The Prime Minister (Mr. Bruce) courteously received the full delegation of growers, and accepted same not as a "deputation," but more in the form of a conference. There were also present the Treasurer (Dr. Earle Page), the Minister for Trade and Customs (Mr. Chapman), Messrs. Hill (Vic.), Prowse (W.A.), Killen (N.S.W.), Green (N.S.W.), M's.H.R.

Growers pointed out many forcible facts, quoting statistics in support. The Government had left three of its babies on the fruitgrowers' doorstep to be nursed: these were the Arbitration Court, the Tariff and the Sugar Agreement. Suggestions were made for a pool for next season, and for the inauguration of a propaganda campaign to sell the present stocks of canned fruit, and for a careful revision of the planting programmes now being conducted.

'Phone Central 8479
F. W. Vear
Fruit Importer and Exporter
COMMISSION AGENT
49 WILLIAM ST.,
MELBOURNE, VIC.
Solicits consignments of APPLES, ORANGES, BANANAS, PINES and all other fruits.
Account sales with cheque daily.

The Prime Minister followed each speaker closely and asked many questions. He promised to go into the matter fully, and to communicate the answer of Cabinet at an early date.

MARKETS FOR CANNED FRUIT IN EUROPE.

Canned fruits are being called upon by the French to make up for the shortages of the French fruit crops, according to word received by the canned foods unit of the Department of Commerce from Consul Jaeckel, Bordeaux (states "Better Fruit," U.S.A.). A demand for American canned fruits exists, states the Consul, sufficient to justify effort made to create business relations.

The failure of the Norwegian fruit crop this year necessitates heavy foreign imports and it is estimated by American Consul George Nicholas Ifft, Bergen, Norway, in a dispatch to the Department of Commerce, that double the usual quantity of American Apples and other fruits are being required. Reports from all sections of Norway showed the poorest fruit crop in more than thirty years.

Without Ammonia. **With Ammonia.**
Balanced Plant Food in Peach Orchard Produces Bearing Wood.

Potash and Phosphoric Acid.

Ammonia, Phosphoric Acid and Potash.
Balanced Plant Food Increases Growth.

THE MEANS of supplying to your trees, in the past, a balanced ration of plant food has been a problem to which you have devoted considerable attention. While the question of phosphoric acid and potash has not occasioned you much concern, it has been extremely difficult to arrive at a decision as to the source of supply of

NITROGEN

the most important and expensive element in the dietary of plants, and the one unfortunately, of which the soil appears to have the least power of retention.

Nitrogen is a stem and leaf producer. It developes new wood, and adds a healthy green colour to the foliage, and is specially necessary for trees in bearing, ensuring reasonable growth of wood, abundant, formation of fruit spurs, plenteous supply of blossoms, and complete development of the fruit.

SULPHATE OF AMMONIA

is at present the cheapest and most highly concentrated nitrogenous fertiliser on the Australian market, and wherever it has been applied to orchard trees results have fully justified its continued use as a means to

Increased Yields of Better Quality Fruit

Sulphate of Ammonia contains approximately 24½ per cent. ammonia, equivalent to 20 per cent. nitrogen in a form readily assimilated by plants. It may be used alone as a top-dressing, or in mixtures for a general application, containing potash and phosphoric acid.

Of special interest to Orchardists is handbook entitled "Productive Fertilisers," which deals with sulphate of ammonia in relation to all forms of agriculture, and with slight modifications to suit local soil and climatic conditions, the tables quoted for various crops might be followed throughout Australia. Copies of handbook "Productive Fertilisers" mailed free on request to:—

THE AUSTRALIAN SULPHATE OF AMMONIA PROPAGANDA COMMITTEE,
360 Collins Street,
MELBOURNE, Vic.

N.S.W. and Queensland: The Australian Gas-Light Co., Haymarket, Sydney: The Broken Hill Prop. Co. Ltd., 28 O'Connell St., Sydney; The North Shore Gas Co. Ltd., 193 Alfred St., North Sydney.

Victoria and Tasmania: The Metropolitan Gas Co., 196 Flinders St., Melbourne; The Broken Hill Prop. Co. Ltd., 320 Collins St., Melbourne.

South Australia and Western Australia: South Australian Gas Co., Waymouth St., Adelaide.

Dried Fruit Export

Should All Growers Contribute the Same Proportion?

Westralian Grower Emphatically says "Yes."

The Editor, "The Fruit World."

Sir,—I was pleased to see in this month's "Fruit World," a letter on the subject—"Should all growers of dried fruit be compelled to export the same proportion?" This is of vital importance to all dried fruit growers.

In support of this, I desire to give a few reasons:—

1. During the war, the A.D.F.A. ensured supplies to the Commonwealth at fair prices. All other growers, merchants, and speculators exported to get high prices.

2. Export prices, having now dropped below cost of production and below local prices, all unorganised growers desire to sell in the Commonwealth. These people wait until A.D.F.A. prices are published, then offer to sell at 1d. or 1½d. per lb. less than those prices, thus underselling their neighbours. Loyal members have to export sixty per cent. of their crop. Local merchants buy at lowest rates possible, in some cases, I know, 2d. per lb. less than fixed prices.

3. As there is a protective tariff in the Commonwealth, we claim that every grower would share the local market values, and also export the same proportion.

Your correspondent says it is essential for men in his district to get cash. I have a report from South Australia stating that 80 per cent. of the growers are mortgaged up to the hilt. This shows that cash is needed everywhere. The same applies to all States, and, if they continue to undersell, they are committing financial suicide.

When a man does a wrong to his fellow men, he desires to justify his action; sometimes, by expressing his desires against his convictions, he can find no justification for so doing.

The Governments of Australia have invested many millions of money in land settlement; they have a large interest in the personal and national welfare of the industry.

As voluntary organisation among fruitgrowers, is an absolute failure, justice seems to call for legislation as the only hope for a prosperous and successful industry.

It is the only way to hope to return the millions invested. Without it, even the interest is unobtainable.

The A.D.F.A., having many years' experience and expert knowledge of the world's markets, are capable, in my opinion, of fixing prices for Australia.

Your correspondent refers to America. About four years ago, their organisation published that, if 75 per cent. of growers did not join up, they would disband. Needless to say, the growers saw, in that event, disaster was inevitable, and 95 per cent. joined.

Their success is now assured, and they are supplying countries nearer Australian than America. Wake up! growers; Organise! be fair! and show willingness to export in the same proportion.—Yours sincerely,

J. THOMAS.

Guildford, W.A.

SWANN & CO.
Established 1822.
A century's experience in handling
FRUIT OF ALL DESCRIPTIONS
All Consignments for U.K. will have Personal Supervision and Attention
Account Sales and Cheques despatched immediately after sale.
3 SALTER'S HALL COURT,
London, E.C., England
Cables:—FIREBRICKS, LONDON
Bankers:—Bank of England.
Australian Representative
Chas. E. Howship, 129 Queen-st., Melbourne, and Surrey Chambers, Perth, W.A.
Victorian and Tasmanian Agents: Bailey, Baldwin Pty. Ltd., 552 Flinders Street, Melbourne.

J. G. MUMFORD
Est. 1906.
Fruit Merchant
Fruit and Vegetables sold for growers from all States.
Account Sales posted daily.
— Exporter —
Exporter of fruit to English and Continental markets.
449-451 Flinders Lane, Fruit Exchange, Melb.
Reference—Satisfied Growers in all States.

RETAILING FERTILIZERS IN SOUTH AUSTRALIA.

Under the provisions of the South Australian Fertilizer Act of 1918, retailers of fertilizers are required to hand to purchasers an invoice or sale receipt. This should contain a statement of the percentages of the constituents of the fertilizer sold and the weight of the contents of the package.

Additionally, if the substance should be a natural fertilizer, such as lime, gypsum, ground phosphatic rock, or bonedust, the percentage of the fine material should also be stated.

"Fine material" is described as those particles which will pass through a sieve having circular meshes 1 millimetre (about 1/25th of an inch) in diameter. These particulars must also be set out on the bags or other containers.

The Act applies to all sales of fertilizers, whether small lots over the counter, or larger quantities in bulk.

The Horticultural Branch of the Department of Agriculture, which is responsible for the administration of this Act, mentions that one enterprising retailer has had a number of gummed labels printed, setting out the particulars required by the Act in respect to such fertilizers as he is handling.

When a sale is made he simply attaches one label to the packet, and another to the invoice, filling in the weight in the space left for that purpose.

MARGETSON
& CO. LTD.
Fruit Importers & Salesmen
30 James St. and James St. Warehouses,
COVENT GARDEN
LONDON, W.C.
and at
Jamaica House,
9 & 10 Botolph Lane, Loodon, E.C.
Sales by PRIVATE TREATY.
Prompt Returns & Settlements
Tel. Add.—FRUTERO, LONDON.
Head Office—Covent Garden Market, London, W.C.
Bankers:
LLOYD'S BANK LIMITED
Law Courts Branch, Strand, London, W.C.
TASMANIAN AGENT
The Port Cygnet Fruitgrowers' Co-Operative Association Ltd., Cygnet

Mother: "You shouldn't eat your cake so quickly, Bobbie. I once knew a little boy who ate his cake so quickly that he died before he finished it." Bobbie: "And what did they do with the rest of the cake, mother?"

In the Home Circle

SELLING AUSTRALIAN DRIED FRUITS.

Instructive Propaganda.

The Australian Dried Fruits Association is to be congratulated on again undertaking an advertising campaign with the idea of increasing the sale of dried vine and stone fruits.

Instructive advertisements are appearing in the public press, and in addition a booklet has been issued giving recipes, etc., and interesting information. The following is reproduced from this booklet:—

Sun-Raysed Currant and Apple Tart.

Line a tin plate with pastry (short or puff), whichever preferred. Peel and core three or four large cooking Apples, then slice very thinly, and put a thick layer of the sliced Apple on the pastry, then sprinkle a handful of Sun-Raysed Currants and seeded Sun-Raysed Raisins or Sun-Raysed Sultanas, and a few very thin slices of Lemon peel. Then sprinkle over a handful of sugar, add another thick layer of sliced Apples, sprinkle with sugar, cover with pastry. Pierce the pastry half-a-dozen times with a fork, and bake in moderately hot oven for ½ hour. A delicious tart.

Sun-Raysed Apple and Currant Cheese Cakes.

1 egg, 2 oz. butter, 2 oz. sugar, 2 tablespoonsful stewed Apple, Lemon rind and juice, 4 oz. Sun-Raysed Currants.

Method.—Warm the stewed Apple, butter and sugar together, beat in the egg and currants, flavour nicely with grated Lemon rind and juice. Bake in pastry lined patty pans.

Sun-Raysed Rock Cakes.

1 cup dripping or butter, 3 cups flour, essence of Lemon or vanilla, 1 cup Sun-Raysed Sultanas or Currants, 2 cups sugar, 2 teaspoons baking powder, 1 egg, ½ (about) cup milk.

Method.—Rub butter and flour sifted with baking powder together, then add sugar and fruit, and mix to a stiff dough with egg and milk. Put pieces the size of a walnut on buttered baking sheet, and bake a nice brown.

Sun-Raysed Johnny Cakes.

Make a short pastry, roll out thin; spread Sun-Raysed Raisins or Sultanas thickly on. Put layer of pastry on top; roll just enough to keep together. Mark into squares, and when baked they will separate easily where marked.

Sun-Raysed Tennis Cake.

6 oz. butter, 6 oz. sugar, 10 oz. flour, 4 eggs, 6 oz. seeded and chopped Sun-Raysed Lexias, ½ lb. Sun-Raysed Currants, ½ lb. Sun-Raysed Sultanas, 4 oz. mixed peel, 2 oz. Almonds, 1 small teaspoonful of baking powder.

Method.—Beat butter and sugar to a cream, then break eggs in one at a time. Add the fruits, peel Almonds, and lastly sift in the flour and baking powder. Time to bake, 2 hours.

Sun-Raysed Mincemeat.

1 lb. Sun-Raysed Sultanas, Lexias (seeded), 1 lb. Sun-Raysed Currants, 1 lb. Sun-Raysed Prunes, 2½ oz. Orange or Citron peel, ½ lb. beef suet, ½ lb. preserved ginger, 2 lb. Apples, 2½ lb. sugar, spice, cup of brandy.

Method.—Peel and chop Apples finely, stone Prunes, and chop finely. Mix all together and any spice desired.

Note.—Chop suet finely. Cover with brandy paper. Will keep any length of time. Nice for tarts or boiled roll.

Sun-Raysed Lexia Scones.

3 cups flour, 1 cup of mixed Sun-Raysed fruit, Sultanas, Currants, Lexias, 2 teaspoons cream of tartar, 1 teaspoon carbonate of soda, ½ teaspoon salt, 1½ cups milk, or milk and water.

Method.—Sift flour, cream of tartar, soda, salt together. Run in the butter, add fruit and milk. Cut into scones.

FRUIT TREES
One or One Million Supplied
W. G. GRAY
Allwood Nurseries
Hurstbridge, Vic.
Write for Catalogue
Post Free.

COVENT GARDEN, LONDON
Ridley, Houlding & CO.,
Large Receivers of Australian Fruits.
Solicit Consignments of
Apples, Pears, &c.
Best market prices and prompt account sales returned.
Correspondence invited.
Representative in Victoria
THE
International Fruit & Mercantile Co.,
410 Flinders Lane, Melbourne
MURDOCH BROS., Hobart

Wanted and For Sale

Classified Advertisements.

Advertisements under this heading, which cannot exceed one inch, will be classified as far as possible.

A valuable medium for assisting in the interchange of orchard equipment. If you desire to sell or purchase an implement, pumps, or any other orchard equipment, insert an advertisement in this column. Surplus stocks of cases, paper and other materials can also be disposed of through this column. Advertise your produce to growers in other parts.

Prices are as follows:—

Casual Advertisements, one or three months—9d. per line of six words. Nine lines to the inch.

Contract Advertisements, six or twelve month, 6d. per line of 6 words, 9 lines to the inch.

Send cash with order.

Spray Material

HEMINGWAY'S ARSENATE OF LEAD. Sole Victorian Agent, ESMOND RUSSELL, 60 Queen St., Melbourne.

Books

FRUIT WORLD ANNUAL AND TRADE RECORD, 1923 edition available. 3/- posted—9 Queen Street, Melbourne.

PRUNING FRUIT TREES, By G. Quinn. Illustrated. 4/9 posted—"Fruit World," 9 Queen Street.

FOR SALE.—20,000 Myrobolan Stocks for budding to Prunes or Plums, well rooted, and average 18in. in height.

Apply to
D. W. IRISH & SONS,
"Indaola Citrus Grove,"
Bamawm, Vic.

WE BUY LEMONS
Green Citrons and Shaddocks, Seedling Oranges, Tomatoes, Cherries for crystallising, Loganberries, Raspberries and Strawberries, Passion Fruit.
C. M. BROOKE & SON,
Whiteman St., South Melbourne. Vic.

Sun-Raysed Fruit Sandwiches.

Take a cup of Sun-Raysed fruits (Lexias or Sultanas), 2-3rd of a cup of boiled ham, ½ cup of sweet cucumber pickles, and chop small or put through a mincer. Add 1 tablespoonful of Lemon juice, and mix with mayonnaise to spreading consistency.

TASMANIAN FRUIT IN SYDNEY.

Leading Varieties of Apples and Pears.

At the request of the Government of Tasmania, writes Mr. A. J. Cooper, Fruit Exchange, Sydney, we have compiled an accurate report of the sales made by us for the five leading varieties of Apples and the seven leading varieties of Pears received by us from Tasmania for the season to June 30th, 1923, which are as follows:—

Apples.	Cases.				
Jonathans	7,298	£2,630	17	6	averaged 7/2½ case
New Yorks	1,165	400	14	6	„ 6/10 „
F. Crabs	2,563	919	5	0	„ 7/2 „
Tasma P.	1,256	405	2	9	„ 6/5½ „
Scarlets	1,289	406	19	0	„ 6/4 „
	13,571	£4,762	18	9	which averaged for the season 7/- per case for Apples.

Pears.	½ Cases.				
W.B.C.	715	£123	3	6	averaged 3/6 ½ case
B.B.	2,483	552	8	6	„ 4/5 „
B.D.C.	2,230	428	13	0	„ 3/10 „
W.C.	2,544	613	0	6	„ 4/10 „
G.B.	845	199	3	0	„ 4/8 „
G.S.	303	61	1	6	„ 4/- „
W.N.	1,298	357	13	6	„ 5/6 „
	10,418	£2,335	3	6	which averaged for the season 4/6 per ½ case for Pears.

Victoria.

PRESENTATIONS TO MR. R. E. BOARDMAN.

During July at Ardmona, a complimentary social was tendered to Mr. and Mrs. R. E. Boardman by fruitgrowers of the Goulburn Valley, Vic.

Mr. Pickworth presided. Speeches were made by Messrs. A. Lenne, F. Pullar, V. R. McNab and W. Young in appreciation of the services of Mr. Boardman to the fruit industry. The presentation consisted of a handsome tea and coffee service, and a travelling rug. In thanking the donors, Mr. Boardman stated the need was greater than ever for fruitgrowers to unite in order to grapple with the problems now confronting the industry.

Musical and elocutionary items added to the harmony of the proceedings.

On behalf of the Melbourne Fruit Shopkeepers' Association, Messrs. J. E. Hooker (Chairman), and C. A. Pullman (Secretary) recently presented Mr. R. E. Boardman with a gold wristlet watch as a token of appreciation for the vigorous and successful fight put up by Mr. Boardman in removing restrictions on the sale of fruit in Melbourne.

CO-OPERATIVE VENTURE FAILS.

Maryborough (Vic.) Cool Store, Cannery, and Sawmill Co. in Liquidation.

In the Insolvency Court, Judge Moule on July 13 made an order for the compulsory winding up a company trading as the Maryborough District Co-operative Cool Stores Society Ltd.

Affidavits stated that the nominal capital was £10,000 in 100 shares of £100 each: the total subscribed capital was £1,720. Commencing as a cool store the Co. soon afterwards launched into canning and sawmilling, which ventures were unprofitable.

The Co. owed to the Victorian Government £20,000, secured by mortgage over its property **and uncalled capital.** It owed the Bank of Victoria £6,074, for which the bank **joint and several promissory notes of the directors.** There was £2,300 owing to unsecured creditors.

The land, buildings, plant and machinery were valued at £10,000. Sundry debtors owed £1,690, and the stock was worth £700.

VICTORIAN ORCHARDISTS' ASSOCIATION IN LIQUIDATION.

Serious Losses Disclosed.

The statement of accounts submitted by the liquidators of the Victorian Orchardists' Co-operative Association Ltd. discloses an unhappy state of affairs. There is a certain deficiency of £7,000: plus the fact that growers who have not paid for their shares in full must pay up another £4,000: the fully paid up shareholders will lose their capital.

If the assets do not realise that sum hoped for, the deficiency will be still greater.

ORCHARD FOR SALE.

Bunyip (Vic.), one mile from Railway Station, 47½ acres freehold, 11 acres of Apples, in full bearing; 1½ acres Granny Smith Apples planted last year, about 8 or 9 acres in grass (cleared).

Cottage and outbuildings, 5 rooms, good sheds and stables.

Price, £1,300. Terms. Purchaser to have chance of working on share system on adjoining property, containing 65 acres, 19 acres of which is under fruit trees.

Write for further particulars to

"FREEHOLD,
c/o "Fruit World,"
9 Queen Street, Melbourne.

The Difference Between Profit and Loss Lies in Clean Orchards

A New Era in Orchard Sprays

GUMLYPTA ORCHARD SPRAY

The combined insecticide and fumigant that can be used on your trees at any time of the year, and costing less than 3d. per gallon for effective strength.

Destroys Woolly and all Aphis, Red Spider and all Scale Insects, White Louse, White and Pink Wax.
We recommend I part Gumlypta to forty parts water for general purposes.

GUMLYPTA ORCHARD SPRAY is Eucalyptus Oil and other insect destroying oils scientifically blended with Carbon Bi-sulphide, etc., so as to mix with water at any strength.
Prevents Fungus growth and Leaf Curl, etc.
Thousands of gallons sold throughout Yanco, Gosford, Wyong, Orange, Richmond (N.S.W.), Mildura, Castlemaine (Vic.), Stanthorpe, Mapleton (Q.), and the Huon (Tasmania).

PRICES:—7/9 per gallon in 4 gallon tins, 8/6 in 1 gallon tins, F.O.B. Sydney.

PAMPHLET AND TESTIMONIALS ON REQUEST.

GILLARD GORDON (Aus.) LTD., Rozelle, N.S.W.

TASMANIA.

Pruning: Grafting: Spraying: Ploughing: Manuring.

(By Our Correspondent.)

GENERAL HEAVY RAINS have been experienced throughout the different fruit districts during the past month. The weather now shows signs of improvement.

Pruning is practically completed and growers are preparing for the application of **delayed dormant sprays for controlling red spider, scales and aphids.**

The general appearance of the different fruits indicate an **exceptionally good fruit bud formation**—the good rains throughout the growing period of last season no doubt being the factor responsible for the satisfactory development.

Large quantities of Apples are still held in cold store, and in the packing sheds. The latter comprise varieties such as Crofton, Tasma, Rokewood, which will keep fairly well under ordinary conditions. In most cases these will be forwarded for marketing during the month.

Orchard Notes.

Re-working by Grafting. In cases where the decision has been made to re-work unsuitable or unprofitable kinds of fruits, it will be necessary to secure scions of the varieties with which they are to be "worked" over to. These should be selected from known vigorous and productive trees and retained fresh and plump until the operation, by covering the cut ends with loose soil so that the sap will not dry out.

Spraying.—Apples, Pears, stone fruits infested with aphids, scales, or red spider, should be treated with suitable contact sprays.

Apply the sprays just before the buds commence to burst (delayed dormant stage).

This is the period when
the overwintering eggs
are hatching, or the viviparous young are mostly being produced. Spraying carried out at this time will give a better control of these pests.

Apricots should also receive treatment for shot-hole fungus. Either Bordeaux or Burgundy Mixtures, applied in the "dormant" stage, will give good results. An efficient formula is that made up on the 4-4-40 basis, using 4 lbs. of copper sulphate and 4 lbs. of lime or soda, according to the desired mixture.

Cultivation. — Spring ploughing should be commenced as soon as the ground is in suitable condition. In a number of orchards there are portions on which the surface soil is prone to quickly set to a hard crust with the first warm weather. In such cases it is advisable to plough these areas first when the soil is moist, leaving those portions which are of a looser texture until later.

Cover crops may be turned under where sufficient growth has been made. The aim should be to obtain the maximum amount of development in these crops that will allow an early ploughing under.

Green crops that are left too late may present a difficult proposition to handle owing to the drying out of the soil and the high growth making it almost impossible to cover them.

An orchard green crop that has commenced to ripen will do more harm than good. The attachment of a short length of heavy chain to the beam of the plough in front of the mould board will facilitate the operation.

Manuring.—Applications of commercial fertilisers that are needed are best applied early in the season, particularly the slower acting kinds, such as blood and bone or bone meal. These may be scattered along the centre of the rows of bearing trees, and turned under in the spring ploughing.

Packing Shed.—As soon as the operations for the season have closed and all fruit has been cleared, it is advisable to thoroughly clean up the packing shed and overhaul gear and equipment.

All waste fruit should be destroyed or converted into pig food.

Case material left over can be sorted and stacked or made up into cases.

Stencils may require renewing or mending; these should be cleaned ready for next season.

Graders will require overhauling and cleaning. The bearings and gears of these should be oiled, greased and the machine covered until again brought into use.

State Fruit Advisory Board.

A meeting of the Tasmanian State Fruit Advisory Board was held at Hobart on 10th July.

There were present: Messrs. A. Davies (Chairman); J. P. Piggott. M.H.A.; E. Ross (representing Sir Henry Jones); H. D. Calvert, Neil Campbell, M.H.A.; B. J. Pearsall; V. J. Shoobridge; T. J. Eddington; and P. H. Thomas, Secretary.

Apologies for non-attendance were received from F. Heywood and V. J. Skinner.

Insurance on Fruit Exports.—The Secretary read an interim report from Mr. F. Wakefield in regard to his investigations as to the carriage of fruit on the s.s. "Port Pirie." Details were also submitted of the expenditure involved in the investigation from the amount, £300, voted by the Board for this purpose.

It was resolved to endorse the action of the Sub-Committee in lodging claims against the shipping companies in respect to the fruit damaged in carriage to "overseas" markets: further to request that the Agent-General be asked to advise as to the best course of taking action.

[Later—The Premier was interviewed, and the request was acceded to, a cable being forwarded to the Agent-General asking for this information.]

Interstate Fruit Carriage. — In order to present a clear case to the shipping companies for improvements in fruit carriage, it was decided to request information from the Sydney Committee of Agents regarding suggested improvements in ventilating cargoes and instances of recent damage.

Standard for Jams.—Decided to call a conference of jam manufacturers to consider the standards proposed by the Department of Trade and Customs.

Dried Fruits.—The Prime Minister wrote declining the Board's request for a re-introduction of a bonus on dried fruits exported.

Mr. Piggott stated that American dried fruits were being introduced into the Commonwealth as ship's stores and sold at 2½d. per lb. cheaper than the Australian commodity. Decided to bring this matter before the Customs Department.

Branding Abbreviations for Fruit Varieties.—The list (as published in July "Fruit World," page 253), was referred back to Pomological Committee.

Rough Handling of Fruit.—Decided to approach Municipal Councils, Fruit Boards, Co-operative Societies and exporters, requesting nomination of persons to act as inspectors to prevent rough handling of fruit as prescribed under the Act.

British Apple Embargo Sought.—Decided, on the motion of Messrs. Ross and Piggott, that the Premier be asked to transmit to the Prime Minister, the question of discussion at the coming Economic Conference in London, the introduction of an embargo on Apples from countries outside the Empire during the period April 1st to June 30th, when the Australian Apples are on the British market.

Votes of thanks were carried to Inspector W. Albury for his valuable report re fruit handling on the Hobart wharves; to Mr. Davies for his able chairmanship of the Board; to the Minister of Agriculture for allowing Mr. P. H. Thomas to act as Secretary to the Board, and to Mr. Thomas for his capable services.

Answers to Queries

Planting Muscatel Grapes.—"H.M." Stanthorpe, asks:—Would you kindly advise me if a block of Muscatel Grapes would thrive on their own, or would they do better if interplanted with other varieties? If so, what varieties should be used?

Answer (by G. Williams, Queensland Department of Agriculture).—There is no advantage to be derived from interplanting with other varieties.

Answer (by H. L. Manuel, N.S.W. Government Viticulturist):—"It is not to be recommended interplanting varieties. Inconvenience in picking in this respect is a drawback. Personally, I have not seen yet where Muscats have done better by resorting to such a course. I presume that "H.M." refers to the Muscat of Alexandria, when mentioning Muscatel Grapes. In this I would advise him to plant the Muscat Gordo in preference. Although it is slightly smaller in berry, it is a better setter, and more prolific."

Grafting Wax.—"J.L.," Mooroolbark, Vic., writes:—"Could you inform me of a good mixture for grafting wax? I have used clay mixed with a little horse manure, but with very unsatisfactory results."

Answer (by P. J. Carmody, Chief Orchard Supervisor, Vic.):—Equal quantities of resin, beeswax and mutton tallow melted together make a good grafting wax.

Answer (by E. E. Pescott, F.L.S., Government Pomologist).—Grafting wax is made by melting together equal parts of beeswax, resin and tallow, and allowing it to cool before using.

A softer form of wax is made by melting the following:—Beeswax, 1 part; resin, 1 part; tallow, ½ part and lard ½ part. This wax is easier to use, and more workable, but the former is the usual preparation. No salt must be in either tallow or lard.

Best Pear Varieties.

"R.E.O." (Bayswater, Vic.) writes:—"Could you tell me, in order of merit, the five most profitable varieties of Pears to grow suitable both for the Melbourne and Sydney markets, also the order in which the rows should be planted, so that the varieties would pollenise one another?"

Answer (by G. W. Peart, Bairnsdale, Vic.).—Bartlett, Josephine de Malines and Beurre Bosc are very good for both Melbourne and Sydney. Beurre de Capiaumont is very favorably taken in Sydney, but not much demand for same in Melbourne. Winter Nelis, Winter Cole, Packham's Triumph, Broompark and Keiffer's Hybrid are all good varieties.

Plant Packham's Triumph nad Keiffer's Hybrid near one another; Josephine de Malines, Bartlett and Winter Nelis in another block.

Pear Trees Not Setting.

S.G., Shepparton, writes:—"I have a block of very large 9-year-old Winter Nelis Pear trees. These trees flower very heavily each year, but do not set any fruit. Could some of your readers advise me what to do in this connection?"

Answer (by G. W. Peart, Bairnsdale, Vic.).—Would advise enquirer to go round his trees and cut off at least half of the spurs. Winter Nelis is notorious for spurring too freely, and it is only by very severe thinning of the spurs that a payable crop will result.

Answer (by F. W. Vear, Burwood, Vic.).—Winter Nelis is an irregular bearer, and it is difficult to give the reason. Do not prune heavily, but thin the blossom severely.

T. STOTT & SONS
Fruit Merchants
Established 1882

A Trial Consignment solicited from Growers in all States.

Prompt Settlement.

11 WESTERN MARKET, Melbourne

TASMANIA
We are the Leading Australian Firm of
FRESH FRUIT EXPORTERS, JAM MANUFACTURERS (IXL Brand), FRUIT CANNERS, HOP FACTORS (owning the largest cool stores for this purpose in the Commonwealth).
Supplies of Corrugated Strawboard, Genuine Sulphite Paper, Nails and best Packing Materials available at all times.
Sole Distributing Agents for the Southern Tasmanian Associated Manufacturers of Evaporated (dried) Apples.
Agents for—
Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osaka Shosen Kaisha, London Assurance Corporation.
Correspondence Invited.
H. JONES & CO. LTD.,
HOBART

Fruit Shipments
LONDON
Liverpool and the Continent

W. D. PEACOCK
& CO.
24 Martin Lane, Cannon St. LONDON, E.C., 4
AND HOBART, TASMANIA
Solicit Consignments
The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

Spraying Apples.

Peaches for Canning.—"Barossa" asks: (1) Will you kindly let me know whether spraying Apples with Bordeaux when they are commencing to bloom is likely to cause russeting of the fruit.

(2) Are the following Peaches suitable for canning—Eureka and Late Italian Cling. These varieties have, during the last few years, been planted or budded on freestones extensively in this district.

Answer (by P. J. Carmody, Vic.):

(1) Spraying Apples with Bordeaux for Black Spot when coming into bloom causes slight russeting. The russeting of high colored fruit, such as Jonathans, is a decided blemish. Lime Sulphur sprays do not russet, and are effective against Black Spot.

(2) These varieties are not known to our supervisors in the Peach-growing districts, nor could they learn anything from the cannery managers about them, so that one can infer that these varieties have no outstanding features from a canning point of view.

Answer (by G. W. Peart, Goodman's Nursery, Bairnsdale, Vic.).—

(1) Yes. Quite safe from russeting, if the Bordeaux is applied before the petals open.

(2) Both varieties are suitable for canning, but they are easily superseded by such choice varieties as Tuscan, Sims, Phillips, Goodman's Choice, Selma, Golden Queen.

FRUIT GROWING IN PALESTINE.

The growing of Oranges, which centres on the Plain of Sharon, in the vicinity of Jaffa, supplies the leading item of the export trade of Palestine, and is one of the most important economic assets of the country, states the "Imperial Food Journal." There are approximately 6,000 acres of Orange Groves in the country. The Jaffa Orange is a particularly sweet and luscious fruit, and over half of the export crop is marketed in the United Kingdom. Considerable quantities are also exported to Egypt. The possibilities for increasing the crop are excellent. Lemons and Grape fruit are grown principally for the local trade. Apricots are widely grown, but the export trade is small. Figs and plums are grown only in sufficient quantities for local consumption.

COLD STORAGE OF FRUIT.

A CONFERENCE of the Cold Stores Association of Victoria will be held at Harcourt (Vic.) on August 8 and 9. Delegates will attend from various parts of Victoria. An interesting and profitable session is assured.

One of the problems of cold storage there is the constantly recurring trouble known as **Apple scald.** This will be discussed at the forthcoming conference. In order to lead a discussion on this subject, we publish hereunder a resume of a paper on this subject, written by Mr. J. H. Lang, Chairman of Directors of the Harcourt Cool Stores Ltd. The paper is as follows:—

Apple Scald.

IN DEALING WITH this disease of cool stored apples, confusion is often caused by two distinct skin troubles being classed under one name.

(1) **Scald** is the most prevalent and most serious of the skin blemishes. It is a browning or blackening of the skin, and does not extend into the flesh. Green varieties of apples, such as **Stone Pippin** and **Granny Smith,** are particularly susceptible to this disease, especially when picked before being fully matured. Delayed storage, which permits of the skin of the fruit becoming waxy, is often beneficial to these varieties.

(2) The disease called by the Americans **"Soft Scald,"** is much more prevalent this year. This differs from "scald", being of a light brown color, and the scalded area becomes markedly sunken, is distinctly margined, and the flesh beneath turns brown.

Jonathans are particularly liable to Soft Scald, which may vary from small spots to practically the whole surface of the apple.

The cause is not known, nor does there seem at present any way of preventing it.

Some believe that the trouble is related to box bruising, or bruising caused by tight packing.

An examination of twenty-five lots of Jonathans in the Harcourt (Vic.) cool store, grown in various parts of the district, shows twelve to be affected by soft scald, the severity varying from one to twenty-five per cent., and thirteen to be immune. The following table gives a detailed result of these observations:—

	Soft Scald.	No Scald.
Number of cases ..	12 ..	13
Watered Heavily. ..	11 ..	10
„ Lightly . ..	1 ..	3
Manure	4 ..	4
No Manure	8 ..	9
Soil, Heavy	2 ..	3
„ Light	10 ..	10
Stored Immediately	9 ..	12
Delayed	3 ..	1
Age of Trees.		
Under 10 years.. ..	4 ..	3
Over 10 years	8 ..	10

The growers state that the fruit was matured when picked, most of them making three pickings during the season. Some irrigated right up to the time of picking, while some hardened the fruit off for one or two weeks without any apparent difference in the results.

Nor does the position of the fruit in the cool store have any effect, in some instances the fruit stored on top of the stacks or near the gangway was the worst, and in other cases just the reverse.

The average temperature of the store was 31 degrees, and the humidity 72 per cent.

There is a marked difference in the flavour of those apples liable to Soft Scald and those not, the former being much more acid. The Directors of the Harcourt Store are having analysis made of different samples, the result of which may open up further lines of investigation.

FRUIT TREES

All Leading Varieties

ALL STRONG, HARDY AND WELL GROWN

Apple and Plum Stocks

Write for particulars

THOS. RUSSELL

Alliance Nurseries,

KINGLAKE - VIC

Commonwealth Government Line

FAST PASSENGER AND CARGO SERVICE TO LONDON

Via Adelaide, Fremantle, Colombo and Port Said, transhipping at Colombo for Calcutta, Rangoon, Madras and Bombay : :

VESSELS SAIL AS UNDER :—

	Tons	Brisbane	Sydney	Melbourne	Adelaide	Fremantle
T.S.S. JERVIS BAY	13,850	28th July	4th Aug.	8th Aug.	11th Aug.	16th Aug.
„ LARGS BAY	13,850	18th Aug	25th „	29th „	1st Sep.	6th Sep.
„ HOBSON'S BAY	13,850	8th Sep.	15th Sep.	26th Sep.	29nd „	4th Oct.
„ ESPERANCE BAY	13,850	6th Oct.	13th Oct.	17th Oct.	20th Oct.	25th Oct.
„ MORETON BAY	13,850	29th „	3rd Nov.	7th Nov.	10th Nov.	15th Nov.

Taking Wool, General and Frozen Cargo at Lowest Rates.

FOR FULL PARTICULARS APPLY TO—

Commonwealth Government Line, 447-451 Collins St., Melbourne

Branch Offices : SYDNEY, ADELAIDE, BRISBANE

AGENTS AT ALL OTHER AUSTRALASIAN PORTS

A NOTED HORTICULTURIST PASSES.

Death of Mr. John Cronin, Curator of Melbourne Botanic Gardens.

Widespread regret was caused by the news of the death of Mr. John C. Cronin, Curator of the Melbourne Botanic Gardens, which occurred on June 30 last. In the early part of last year Mr. Cronin became seriously ill, but afterwards his condition improved so much that he was able to resume his duties. The improvement, however, failed to continue, and Mr. Cronin gradually sank.

Mr. Cronin, who was born at Clunes in 1865, worked for some years on the mining field there. Coming to Melbourne in 1886, he joined the staff of the Botanic Gardens under the late Mr. W. R. Guilfoyle. Recognising his ability, Mr. Guilfoyle entrusted him with work requiring skill, knowledge, and reliability.

Mr. Cronin, however, who was ambitious, felt that the position did not offer sufficient scope for his energy, and ten years later he obtained a position as orchard inspector in the Department of Agriculture. This experience proved exceedingly valuable. Mr. Cronin, indeed, was soon recognised by orchardists as a man of exceptional capacity. It was he who first advocated the greater retention of the lateral system in fruit trees. His advice in relation to the pruning of Jonathan apple trees in this way brought many thousands of pounds to fruitgrowers.

In 1908 he succeeded Mr. W. B. Luffman as principal of the School of Horticulture at Burnley, a position which he held for only a year, but during that year he brought the school to a high degree of efficiency.

When Mr. Guilfoyle, in 1909, resigned his position as director of the Botanic Gardens, it was on his recommendation that Mr. Cronin succeeded him. He filled the position admirably, for, in addition to his great knowledge, he had the artistic instinct highly developed, abundant energy, and a strong personality. The gardens themselves best bear witness to his splendid work. Always a strong advocate of the claims of Australian plants, Mr. Cronin soon gave to this section outstanding importance.

As a plant hybridist, he possessed unusual skill, and also that intuitive knowledge which enabled him to select unerringly the most suitable types. But only his intimate friends were aware of the really wonderful results that he had obtained with Heuchera, Hemerocallis, Daffodils, Japanese Iris, Gladioli, and more particularly with Watsonias and Dahlias.

Essentially a public-spirited man, Mr. Cronin declined to exploit these brilliant successes commercially, though had he done so he could have made much money. He generously gave his creations for beautifying the gardens, and he would also exchange them for choice growths raised by nurserymen. These, too, would be used to add to the variety and beauty of the gardens. Victorian horticulture owes a deep debt of gratitude to him. As lecturer or judge, his services were freely given to any horticultural society, and as secretary, and afterwards president and trustee of the Victorian Horticultural Society, he did valuable work.

At the graveside the officiating clergyman, after eulogising the life and career of this noted horticulturist, said that it was regrettable his closing days were embittered by the parsimony of the Government authorities. A memorial was suggested.

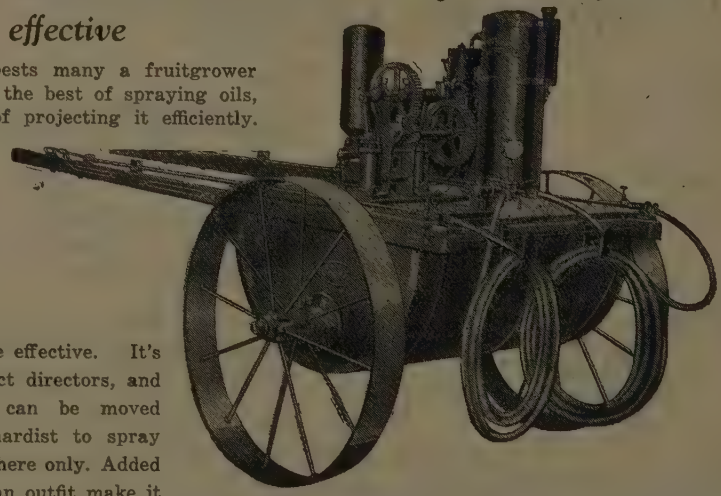
Mr. Cronin leaves a widow and a family of three daughters, two of whom are married, and two sons. The eldest son served three years at the war.

Spraying Fruit Trees.—A new patent spray "pistol" has been invented by a fruitgrower, Mr. R. G. Edgell, of Bathurst, N.S.W. This has caused favorable comment by users. Particulars are obtainable from Messrs. Buzacott & Co., Market-street, Sydney, N.S.W.

GOOD AMMUNITION NEEDS A GOOD GUN

To be fully effective

Yet in his war on orchard pests many a fruitgrower fails to get good results from the best of spraying oils, because he lacks the means of projecting it efficiently.



The Cooper Spraying Plant

makes every drop of spray mixture effective. It's strong, steady pressure, and perfect directors, and the convenience with which it can be moved wherever wanted, enable the orchardist to spray exactly where it is necessary, and there only. Added to this, it's many fine features as an outfit make it an excellent purchase.

Write to-night for Particulars.

Cooper Engineering Co, Ltd.,

350 Spencer St., Melbourne. *129 Sussex St., Sydney.*

Clarke & Fauset Ltd., Eagle St., Brisbane.
Harris, Scarfe & Sandovers Ltd., Perth.
N.Z. Loan & Mercantile Agency Co. Ltd., Rockkhampton, Townsville and Hughenden, Q.
Australasian Implement & House Furnishing Co. Ltd., Adelaide, S.A.

ANOTHER COMMONWEALTH LOAN.

An Attractive Investment.

The Commonwealth Treasurer has just launched an appeal for a Loan of £21,500,000, this sum being the amount required to meet the unconverted portion of the huge 7th War Loan of £44,000,000 raised in September, 1918, which falls due on September 15th next.

The 7th War Loan was an extraordinary one in many ways. The Great War was then at its height, and although the people of the Commonwealth had already subscribed nearly £150,000,000, they rallied again, and no fewer than 243,181 individual applications for Bonds were received, and the amount subscribed was over £4,000,000 more than the £40,000,000 asked for.

The 7th War Loan is the first of the War and Peace Loans to fall due for payment, and it is therefore absolutely necessary that the present appeal must be responded to without delay.

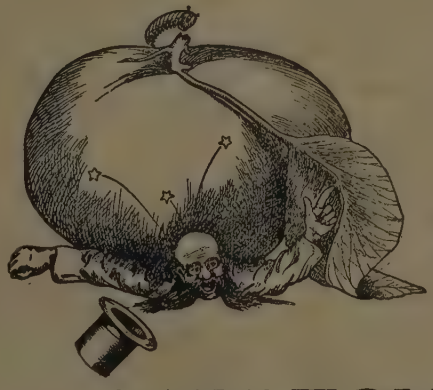
The rate of interest offered for the present Loan is 5 per cent., and as the Bonds are being issued at £98 per cent., which means that £98 cash will buy a £100 Bond, the rate of interest works out at nearly 5½ per cent. The issue will also be free of State Income Tax, thus making the interest rate a very attractive one.

As a matter of fact the rate is much more generous than the original rate offered in September, 1918, when Australia was in the throes of the Great War, and when money generally was much dearer than it is today.

Holders of Bonds which mature in September next are also invited to convert their holdings into the present issue, which is for a 5 year period, and holders of 4½ per cent. Bonds maturing in 1925 will be allowed to convert their Bonds into the present issue if they put up an equal quantity of new money.

Altogether it is felt that the Federal Treasurer has made a very fair proposal, especially considering the undoubted security.

There is no safer security in Australia than a Commonwealth Government Bond.



"CARLTON" LEAD IS CODLIN'S DOOM, CLEANS THE GARDEN LIKE A BROOM.

The above is the winning slogan by Mr. S. G. T. Lacey, of Carboor, near Wangaratta.

THE TINIEST TASTE OF "CARLTON" LEAD TURNS EVERY GRUB FROM QUICK TO DEAD.

This slogan, by Messrs. Thomas & Butler, of Bunyip, obtained second place.

"CARLTON" Arsenate of Lead

STILL THE HIGHEST QUALITY ON THE MARKET.

QUALITY and QUANTITY in EVERY DRUM GUARANTEED

BOOK YOUR ORDER NOW

F. R. MELLOR, *440 ELIZABETH ST., MELBOURNE*

WOOD-WOOL FIRST QUALITY AND AUSTRALIAN

Less than half the cost of Imported.

AUSTRALIAN MADE *FIRST QUALITY*

Write for quotations to

LAWFORDS FRUIT EXCHANGE PTY. LTD., DONCASTER, VIC.

(Sole distributors)

Poultry Notes.

Conducted by Ian Hamilton.

Chicken Chirps.

The hatching season has commenced.

Strong chicks come only from strong eggs, and strong eggs from strong hens.

Don't breed from weaklings, no matter what their pedigree may be.

Grit and water must always be available to chicks.

Remember that chickens are easily drowned. Therefore provide shallow vessels. Water must be kept fresh and cool.

Green food, finely chopped, may be fed to chicks after the first few days. It may later on be given in the mash. On no account feed green stuff that is rank.

Chickens should be fed freely and often. They require no food for the first forty-eight hours after hatching.

Rolled oats should form the first meal. It is easily seen by the chicks and easily digested.

Chick food may be introduced after a few days, and after a month or so. Whole wheat and hulled oats can be mixed in, and gradually increased, while decreasing the chick food. This method prevents a too rapid change of diet.

Mash may be fed to chicks in the morning with advantage, provided it is carefully handled and not half buried in dirt and grass, where much of it is often left to ferment. It should be fed on a flat piece of tin or board.

Know the capacity of your yards, and hatch accordingly. It is a great mistake to overcrowd.

Aim to have your first hatch out in July, and your last in September.

There are three factors that affect the growth of chickens—inherited characteristics, environment and food supply.

Stray Scratchings.

Chicken pox can most easily be cured by treating the sores with a mixture of sulphur and vaseline.

Egg laying mashes are not entirely suitable for breeding birds, which require less meat meal and more chaff-fed green feed.

Care taken in forming the nucleus of a poultry farm, will prove a great asset in future operations.

A pale comb and dull eyes always denote lack of vigor and stamina. Birds in that condition are usually anaemic, and should not be used in the breeding pen.

It does not pay to keep a hen for laying purposes after the second year.

The intensive system has been proved the best method of housing birds for winter egg production. For breeding pens, the semi-intensive system, that is to say, an enclosed pen with a grass run attached is the best.

The sales effected through the Victorian Poultry Farmers' Co-operative Society for the past year amounted to £14,139/2/5. The Society shipped overseas 20,000 dozen eggs at the glut period last spring. It also supplied the eggs for the very fine exhibit of the Agricultural Department at the last Royal Show.

Poultry and Orchard.

According to Mr. T. R. Robinson, Organising Secretary of the National Utility Poultry Society (England), fowl manure is one of the most concentrated fertilisers produced on the farm, as it contains a very large proportion of nitrogen, with a fair amount of potash and phosphoric acid. Where many birds are run per acre the danger is that the land will become over fertilised and rank with excess of nitrogen, especially heavy soils, which are very retentive. The judicious application of lime tends to prevent rankness, to improve the texture of the soil, and to hinder the onset of acid or sour conditions, which inevitably depreciate the quantity and quality of the herbage. An interesting reference was made by Mr. Robinson to the case of two fowls which had been running in an orchard, and on opening the crop of one it was found to contain 190 maggots of the pear midge, 127 green fly, 12 red ants, 2 caterpillars, and 1 beetle —whilst the other contained 14 leather jackets, 10 fever flies, 2 wireworms, 4 cut worms, 5 beetles, 50 ants, 7 woodlice, 4 slugs, 1 millipede, and 20 caterpillars of the winter moth. There is no question that poultry are most valuable for running amongst fruit trees during the

STONE FRUITS
CITRUS TREES
and QUALITY ROSES

A Good Start means Everything!

BEFORE PURCHASING send for Lasscock's Catalogue and prices. These South Australian grown trees are unsurpassed for hardiness, healthiness, and vigor. They will jump from the start and bring profit to the grower. Our stocks are excellent and prices right. Special attention is given to packing.

LASSCOCK'S NURSERIES Henley Beach Road, LOCKLEYS, STH. AUSTRALIA

early months of the year, but as the lecturer explained in answer to a question later on, when windfalls of apples are on the ground they are liable to upset poultry.

Beekeeping Notes.

TRANSPORTING BEES.

THE essential points to consider when transporting colonies of bees are:—(a) The provision of ample ventilation; (b) the fastening together securely of all hive parts, including wedging of frames firmly together; and (c) the removal from the hive of all combs heavy with honey. The temperature must of course be taken into consideration when provision for ventilation is being made; so also must the population of the colony and the distance to be travelled.

The procedure in preparing for transport a hive that contains a fairly populous colony during warm weather should be as follows:—

1. Remove for separate transportation any combs heavy with honey; these can be replaced with empty combs.

2. Make all self-spacing frames firm by crowding together and inserting wedges between the outside frame and the wall of the hive.

3. Place an empty super on the hive.

4. Fasten the bodies of the hive together (and, if possible, the bottom board) with sound strips of board—one vertical strip at the rear and one on each side of the corner near the entrance, making sure that the bottom board is secure.

5. Fit a full-sized wire cloth screen on top of the empty super and fasten on with cleats, setting double cleats at each end, so that the cover can be placed on without interfering with ventilation.

6. When the bees have finished work for the day, press a strip of wire cloth into the hive entrance and then securely fasten with thin cleats.

At night or during cool weather colonies can often be removed short distances with less preparation as far as ventilation is concerned; for instance, an empty super may not be necessary. It should be understood, however, especially by beginners, that too much ventilation is far better than not enough; also, that it pays well to make all hive parts firm and see that there are no cracks in the bottom board through which the bees might escape.

A mistake often made by beginners, and even by established bee keepers, is the spreading of brood with the idea of hurrying brood-rearing. This practice of putting empty comb, or even partly filled ones, between the brood combs more often results in loss than in gain.

When no small stock with a laying queen is available, a colony with an unfertile queen may be kept going by giving it a comb of eggs, or young larvae from a normal colony, once or twice a week, according to the number of bees. At the same time, remove one of the combs of drone larvae and substitute it for the comb removed from the normal colony, which will usually throw out this useless brood. In this way a colony may even be gradually built up; and, when young queens are available for swarmed stock, the valueless queen can be replaced.

"In some districts, particularly in forest country" (says Mr. F. R. Beuhne, Government Apiculturist), "much trouble occurs with hive stands, and even hives, through white ants entering the wood of the stand where it touches the ground, and destroying it, and unless checked, eventually the hive. At a trifling expense in the first instance, this risk may be entirely avoided, by saturating those pieces of the stands which come into contact with the ground, with a solution of sulphate of copper, generally known as bluestone. In a box ½-inch longer, inside, than the longest pieces to be treated, and made water-tight by running boiling wax over all the joints, dissolve sufficient bluestone in water to make a saturated solution, so that in about a day, with occasional stirring, some of the crystals remain undissolved. The wood to be saturated should be thoroughly dry, and be packed into the box of solution, with bits of stick between the pieces to keep them apart, and a weight on the top to keep them under.

Immersion for 24 hours will be sufficient, when the wood may be exposed to air and sun to dry. After the stands are made up the pieces impregnated should be painted or tarred to prevent the bluestone being soaked out by rain water."

NOW IS THE TIME

To plant Fruit Trees, BUT BE SURE to plant Only the Very Best. You can secure the best quality trees in all leading Commercial Varieties from the

BALHANNAH DECIDUOUS NURSERIES

Postal Address - - - BALHANNAH, SOUTH AUSTRALIA

Enquiries Solicited. H. N. WICKS, *Proprietor.*

FIRST!

..THE..

Latham Dehydrators

The Widest Fruit Drying Experience in the world is behind these plants. The best possible recommendation is the extent of one's patronage. My plants attract by far the largest drying business in the Southern Hemisphere.

Some Installations

Purchaser	Principal Fruits
Merbein Dehydration Trust, Mildura	**Sultanas**
Tasmanian Dehydration Pty. Ltd. Bridgewater	**Apricots Prunes Apples**
Charles Martin, Yackandandah	**Prunes**
Swallow & Ariell Ltd. Port Melbourne.	**Carrots Turnips Cabbages, etc.**

Lemon Processing Plants.

Dried Fruit Graders

Dried Fruit Boxing Presses

Apple Slicing Machines

Belting Pulleys, Shafting, Bearings, Engines and Boilers, Cranes and Hoists, Piping, Trucks, Conveyors, Thermometers, Fruit Trays etc., etc.

D. J. LATHAM

157 Queen Street,
MELBOURNE,
AUSTRALIA.

SUBSCRIBERS' PAYMENTS RECEIVED.

The following are the subscriptions received from June 20th to July 20th, 1923. The month quoted in parenthesis indicates to what date the subscription is paid. These are exclusive of the subscribers who have paid to local agents or to our offices in the various States:—

G. I. Adcock (July, '23), T. Adamson (Nov., '23), Agric. Dept. (Elsenburg) (March, '24), Agric. Dept. (Potchefstroom) (Mar., '24), Agric. Dept. (Cedara) (March, '24), Agric. Dept. (Glen), (March, '24), School of Agric. (Grootfontein) (March, '24), J. Alexander (June, '24), Algemeene Vruchten Import (April, '24), E. C. W. Allen (June, '24), Mark T. Amos (April, '24), W. S. Arnold (Feb., '24), W. Anker (May, '24), C. Batchelor (Sept., '23), R. Bell (Oct., '23), Bender & Co. (June, '24), C. W. Booth (April, '24), A. W. Brain (June, '24), W. Le Gay Brereton (April, '24), T. M. Brown (Dec., '23), W. H. Browne (Jan., '24), Burnside & Co. (June, '24), J. A. Bush (April, '24), W. H. Carne (June, '24), H. V. Child April, '24), E. Clutterbuck (Nov., '23), J. Cornelinsen (July, '23), C. Coster (Aug., '23), J. Croll (Jan., '25), D. Crothers (June, '23), A. V. H. Cripps (Jan., '24), P. J. Curnow (June, '23), H. Cunningham Aug., '23), Capt. H. Dakin (Dec., '23), C. T. Dadswell (May, '24), Geo. Davies (May, '24), H. Denham (June, '24), Dickinson Bros. (Dec., '23), Dept. of Agric., Wellington (June, '24), F. G. Donaldson (Oct., '23), H. F. Edwards (Mar., '24), H. E. Ewins (Feb., '24), A. Filsell (Sept., '23), J. A. Forbes (May, '24), T. A. Frankcombe (Mar., '23), F. J. Garford (May, '24), George Bros. (Nov., '24), J. Gill (April, '24), Gollin & Co. (May, '24), W. M. Green (July, '24), Geo. Gomm (Aug., '23), T. A. Gwillam (June, '23), C. W. Hammerling (Nov., '23), F. Hall (April, '24), H. Lipson Hancock (May, '24), C. J. Harley (Sept., '23), E. D. Harrison (July, '23), C. Harris (Dec., '24), R. E. Haysey (June, '24), E. W. Hedditch (May, '24), Holden Bros. (June, '23), Hill Bros. (June, '24), Geo. Higgens (May, '24), C. H. Holder (April, '24), J. L. Holland (Aug., '23), E. R. Hyne (Nov., '23), Humber Fruit Brokers (Nov., '23), G. P. B. Jackes (May, '24), E. Jeanes (June, '24),, Mrs. N. I. Johnston (June, '24), J. Kay (June, '24), S. J. Kellaway (Dec., 24), Thos. Kelly (June, '24), A. R. Knight (Dec., '23), L. Knapton (Aug., '24), H. Kregor (Feb., '24), R. M. Leisk (Feb., '24), E. C. Leach (April, '24), P. A. Lee (May, '24), J. Livingstone (Sept., '23), Thos. Ling (Oct., '24), G. T. Litchfield (Sept., '23), P. Vernon Lockey (June, '24), A. Luckett (June, '24), A. M. Luttrell (Jan., '24), F. B. MacKenzie (Feb., '24), E. Mann & Son (June, '24), D. Martin (Aug., '23), Matthews & Son (Feb., '24), R. J. Mitchell (Sept., '23), M. J. Millar (June, '24), W. Moses Nov., '23), J. M. M. Muir (Feb., '24), V. R. M'Kean (June, '24), Rev. F. McQueen (June, '24), H. B. Naylor (Dec., '23), D. Ockenden (Nov., '23), Oppenheimer Bros. Ltd., (Dec., '23), E. Pannach (July, '23), S. W. Packham (Oct., '24), T. W. Pearce (Sept., '23), W. R. Ponsett (June, '24), H. Powell (Dec., '22), W. H. Press (Feb., '24), C. R. Ratcliffe (Mar., '24), M. A. Redman & Son (June, '24), J. S. Read (Sept., '23), J. H. M. Reynolds (Dec., '23), G. W. Robinson (June, '25), J. Robinson (April, '24), G. Rossini (Nov., '23), C. L. Rutty (Sept., '23), W. Sandford (Sept., '23), D. M. Shoobridge (Jan., '24), A. P. Shier (Oct., '23), F. Sissons (Jan., 25), A. Simpson (Mar., '24), E. L. Singleton (Mar., '24), D. A. Smith (Feb., '24), W. A. Smith (Jan., '24), A. Snelling (June, '24), Stanmore Preserving Co. (Feb., '24), E. Stocks (May, '24), S. E. Stobo (July, '23), F. E. Stuchberry (Dec., '24), Rev. H. Tate (Feb., '24), C. Foulkes Taylor (June, '24), H. W. Terry (May, '24), W. C. Thomas & Sons May, '24), A. E. Thiele (July, '24), B. T. Turner (Mar., '24), W. C. Voss (Dec., '23), H. M. Voss (Jan., '24), Water Cons. & Irrig. Com. (June, '23), G. V. Watkins (Jan., '24), M. T. Watson (Jan., '24), Fred Ward (June, '24), G. W. Wickens (July, '24), Williams Bros. & Snow (June, '24), J. S. Wilkinson (June, '24), A. W. Wise (June, '24), F. Witherby (Jan., '24), Wood, Omerod & Co. (April, '24), Geo. Wood (July, '23).

WANTED AND FOR SALE ADVERTISEMENTS.

The attention of growers and others desirous of selling or purchasing implements, spray pumps, tractors, cases, wood wool, paper, land; in fact, any item used in connection with the orchard or vineyard, is directed to the special advertising section devoted for this purpose. It is also possible by means of this column to develop a direct trade in fruit as between growers of deciduous, citrus and dried fruits.

For full particulars, see page 293.

TESTIMONIAL FOR A.M.S.

Mr. T. A. Dickson, Chemist, Geelong. Dear Sir,—Just a line to thank you for your wonderful A.M.S. I have used several bottles, and am now almost quite recovered from the indigestion I have suffered from for years, and the almost Chronic Neuritis in my wrist and knee. Wishing you all success with your splendid A.M.S., yours gratefully, Edith H. Primrose, Park-street, South Yarra. Sold by all chemists and country storekeepers at 3/- per bottle, by post 3/6. Manufactured by T. A. Dickson, Chemist, Geelong, Vic.

.. THE ..

Farmers and Settlers' Co-operative Insurance Company of Australia Ltd.

Capital, £100,000. **Subscribed Capital, £70,000.** **Paid Up, £35,000**

THIS IS

THE ORCHARDISTS' CO.

for insuring his buildings, fruit in store, Workers' Compensation, and other risks. An orchardist who becomes a shareholder and places his insurances with this Company participates in the profits which his own business creates. Thousands of farmers and orchardists are already shareholders. Write for particulars.

Victorian Branch:

Directors—Mr. SYDNEY SAMPSON, M.H.R., Mr. DUNCAN McLENNAN, Mr. P. H. H. IBBOTT.

Manager—H. L. CARROLL

Address: 360 Collins Street, Melbourne

YOU are invited to become a shareholder.

AGENTS WANTED.

ESTABLISHED 1866. *TELEPHONE 2979*

Watters' Seeds

For the CHOICEST VEGETABLES and most BEAUTIFUL FLOWERS sow our Seeds

We are Headquarters for—

Hunter River Lucerne

Cleaned by our Special Machinery, and free from all weeds. SPECIAL QUOTATIONS for Cwt. or Ton lots on application.

We have large stocks of the following in best re-cleaned Seed: **Broadleaf Dwarf Essex Rape, Grasses, Clovers, and all varieties of Green Fodder and Root Crop Seeds**

Write at once for our Special Quotations.

Spraying Oils, Fungicides, Raffia

Illustrated Catalogue and Calendar, post free.

WATTERS & SONS

251 & 253 Swanston St., Melbourne

The Fruit Trade

Every Firm should be Officially Represented

if only by a line or two—Our Readers are Your Clients. It is an able and wise introduction, and when you go through the fruit districts our Readers will have already known you through us.
It pays best to send Consignments Regularly — Not Occasionally — to the best markets, by doing so you strike the rising and falling markets and make a fair average for the season.

A ten times wider and better distribution will ensure a ten times greater production, at more payable returns. It is large and valuable exports from settled industries that make a nation prosperous.—Ed. "F.W."

This Journal is the recognised representative of the FRUIT TRADE in the Southern Hemisphere.

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS.
Advertising in this Journal.

NEW SOUTH WALES.

Sydney.

Chilton, F., City Fruit Markets.
Hopkins & Lipscombe, Fruit Exchange.
Rogers, F. H. G., Fruit Exchange.
Rule & Beavis, Fruit Exchange.
Wade, Noel, V., Royal Exchange (representing the North of England Fruit Brokers Ltd., Manchester, Eng.).

VICTORIA.

Melbourne.

Coastal Farmers' Co-op. Society, Western Market.
Davis, J., Western Market.
Dennys, Lascelles Ltd., 509 Collins Street,
Lister, G., Western Market.
Mills & Co., J. B., 9 Queen Street (representing Nothard, Lowe & Wills Ltd., London).
Millis, A., & Sons, Western Markets.
McClure, Valentine & Co. Pty. Ltd., 49 William St.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke St.
Silbert, Sharp & Davies, Western Markets.
Stott & Son, T., Western Markets.
Tim Young & Co., Western Market.
Vear, F. W., 49 William Street.
Wade & Co., H. M., 439 Flinders Lane.
Woolf, G., Western Market.

QUEENSLAND.

Brisbane.

Barr, A. S., Fruit Exchange.
Collard & Mackay, Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Finlayson & Son, Fruit Exchange.
Geeves, H. V., Fruit Exchange.
International Fruit and Produce Co., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
W. J. Whitten & Co., Fruit Exchange.

WESTERN AUSTRALIA.

Perth.

Wills & Co. Ltd., G., Exporters.

SOUTH AUSTRALIA.

Adelaide.

Wills & Co. Ltd., G., Exporters.

TASMANIA.

Hobart.

Jones & Co. Ltd., H., Fruit Exporters.
Peacock & Co., W. D., Fruit Exporters, and at London.

NEW ZEALAND.

Auckland.

Radley & Co. Ltd., Fruit Auctioneers.
Turner & Growers Ltd., City Markets.

Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.
Paterson, Thos., & Co., Vogel Street.
Central Produce Mart, Moray Place.

ENGLAND.

London.

Du Costa, Gerald, Covent Garden.
Jacobs, E., & Sons, Covent Garden.
Margetson & Co. Ltd., Covent Garden.
Moore & Co. Ltd., F.W., 8 Arthur Street, London Bridge.
Monro, Geo., Ltd., Covent Garden.
Nothard, Lowe & Wills Ltd., Tooley Street.
Ridley, Houlding & Co., Covent Garden.
Swann & Co., 3 Salter's Hall Court.

Hull.

White & Son Ltd.

Liverpool.

J. Adam, Son & Co.
Roger White & Co., 37 Victoria Street.

Manchester.

North of England Fruit Brokers Ltd.

British and Australasian Market Reports

London (11/7/23).

Australian Apples, per the s.s. "Port Pirie" were generally in good condition, and sold well. Sturmers realised 15/6 to 17/6 per case; London Pippin (five crown), 14/6; Scarlet Pearmains, 15/- to 16/-; New York Pippins, 15/- to 16/-; Rome Beauties, 15/-. A few overripe London Pippins and Pearmains fetched 9/3 and 13/- respectively.

London (16/7/23).

Further sales ex the s.s. "Port Pirie" were:—Sturmers, 17/6 to 18/6, a few at 19/-; Scarlet Nonpareils, 15/6 to 18/-, a few at 18/6; Winter Nelis Pears brought 22/-; trays, 8/6 upwards; Vicars, trays, 6/9; Glou Morceau, 7/6 to 8/-.

London (23/7/23).

Western Australian Oranges per s.s. "Ormuz" realised 30/- to 35/- per case for best quality fruit, whilst others fetched from 26/- to 29/-.

London (26/7/23).

Further sales for Oranges ex the s.s. "Ormuz" fetched 15/- to 25/- per case. Many cases discharged proving somewhat wasty.

Oranges in London.

A cable has been received dated London, July 23rd, stating that good quality Oranges from West Australia by the "Ormuz" realised 30/- to 35/- a case; others somewhat spotty, 26/- to 29/-. The first shipment of Victorian Oranges by the "Esperance Bay" has reached London, but has not been unloaded owing to the dockers strike. The V.C.C.A. have received a cable, however, stating that the operation of the cool chamber has not been interfered with by the labor dispute.

New South Wales.

Sydney (26/7/23).

Mr. F. Chilton, City Fruit Markets, Sydney, reports as follows:—

Queensland Fruits.—Pines, smooths (colored), 8/- to 10/-; Pawpaws, 8/- to 12/-. **New South Wales Fruits.**—Bananas (Tweed River), 16/- to 30/-; Oranges, 3/- to 7/6; Navel Oranges, 7/- to 11/-; Mandarins, 5/- to 11/-; Lemons, 5/- to 7/-; Apples, Granny Smith, 7/- to 13/-; Passions, 5/- to 11/- per half case. N.B.—Prices for New South Wales fruit are quoted exclusive of case. **Victorian Fruits.**—Pear, B.B., 10/- to 13/-; Packham, 10/- to 15/-. **Tasmanian Fruits.**—Apples: Crofton, 7/- to 11/-; S.P.M., 5/- to 9/6; S.T.P., 4/6 to 7/-; F.C., 5/- to 8/-; Dem. (Tasma), 9/- to 12/-; Pears, Winter Cole, 5/- to 7/6 per half-case; Winter Nelis, 5/- to 7/- per half case. Trade conditions are still generally very dull, and ample supplies coming forward for requirements. A slight improvement has recently taken place in values of Apples, Pears, Pines and Mandarins, especially for best qualities. Small fruit is very hard to sell.

Victoria.

Melbourne (31/7/23).

The following are the wholesale prices ruling at the Western Market:—Apples—Good to choice eating, 8/- to 10/-; good to choice cooking, 3/6 to 7/-; Bananas: Queensland, 20/- to 27/-, double; Lemons: Victorian, 7/6 to 10/-. Mandarins: N.S.W., 12/6 to 14/6; Oranges: Victorian, Mildura, N.S.W., 10/- to 11/-; Navels, 11/- to 14/-. Passion-fruit: Victorian, 14/- to 25/-; Pineapples: Queens, 8/- to 10/-, double.

Melbourne Market.

The V.C.C.A. market representative, Mr. W. E. Branson, reports as follows for the week ending July 28th:—

Supplies from all States were generally on the light side, prices firming in consequence. Big counts of Navels sold freely, but oversize fruit is still hard to quit. A better demand for Lemons set in, and supplies to hand were not quite in keeping with it. Common Oranges of good quality are firming. Prices:—Navels, choice South Autralians, 60's to 75's, 10/- to 12/-; 75's upwards, 12/- to 15/-; Victorians, 9/- to 14/-; commons, 8/- to 11/-; Lemons, 7/6; to 9/-; Mandarins, 12/- to 14/- for good stuff.

South Australia.

Adelaide (28/7/23).

Apples, eating, 12/- to 14/- per bushel case; cooking, 9/- to 12/-; Lemons, 6/-; Oranges, 7/-; Mandarins, 15/-; Navels, 10/- to 12/-; Poorman, 6/-; Citrons, 4/-; Melons, 8/- per cwt.

Queensland.

Brisbane (27/7/23).

Apples, Tasmanian, Jon., 11/- per case; S.P.M., best, 9/- to 10/-; others, 5/- to 8/-; S.T.P., 8/6 to 9/-; A.R.O., 9/- to 10/-; Delicious, 9/- to 10/-; F.C., 9/- to 10/6; Pears, Vic., W.N., choice, 16/- to 18/-; medium, 11/- to 13/-; J.O.S., 16/- to 18/-; Sydney, Mandarins, 12/- to 14/-; South Australian Lemons, 12/- to 13/-; Passion fruit, best, 7/- to 8/6; medium, 3/- to 5/- per ½ bushel case; Bananas, Cavendish, special 8½d. to 9½d; good quality, 5d. to 7½d.; Ladies' Fingers, 3d. to 7d.; Sugar, 2d. to 6½d.; Pines, Ripley Queens, 2d. to 1/6 per doz.; smooth leaf, 1/- to 2/-; Papaws, 4/- per bushel case; Redland Oranges 9/- to 12/-; small, 4/- to 5/6; North Coast, 9/- to 12/-; others, 3/- to 5/-; Mandarins, choice, 17/-; large, 14/- to 16/-; medium, 9/- to 12/-; small, 3/- to 4/-; Navel Oranges, prime, 14/- to 16/-; small, 10/- to 13/-; Custard Apples, special, 7/6 per ½ bushel case; Lemons, 8/- to 11/-.

Western Australia. . . . . .

Perth (26/7/23).

Apples, Yates, 11/- to 13/- per bushel case; others, to 7/6; Doherty, best, 8/6 to 10/-; others, to 6/6; Granny Smith, best, 11/9 to 15/-; others, 8/- to 9/6; Cleos., best, 9/- to 13/-; others, to 7/-; Dunns, best, 7/- to 9/6; small, to 5/-; Romes, 8/- to 10/6; others, to 7/-; Nickajacks, to 8/3; Jon., 8- to 12/-; Rokewood, to 7/6; Rhymer, 5/6 to 6/9; Navels, dumps, best, 10/- to 13/-; others, to 8/-; flats, best, 7/- to 9/6; others, to 5/6; Oranges, to 4/-; Mandarins, best, 9/- to 14/-; others, to 6/-; Lemons, few, 3/6 to 5/6; others, to 2/6; Cape Gooseberries, 3½d. to 5½d.; Passion fruit, flats, to 20/3 ¼ case to 11/6.

Tasmania.

Hobart (28/7/23).

Apples, eating, 2/- to 5/- per bushel case; cooking, 2/- to 5/-; Pears, 2/6 per ½ case; Pasion fruit, 3/9 per ½ case.

NEW ZEALAND.

Wellington (19/7/23).

The United Growers' Ltd. report under date 19/7/23 prices for Sydney fruits ex the s.s. "Manuka" as follows:—Mandarins, choice, 17/6 to 19/- per case; others, 15/6 to 16/6; Naval Oranges, choice 2⅝in. size, 17/6 to 18/6; others, 15/- to 16/6; common Oranges, 10/- to 11/-; Sydney Lemons, extra choice, 22/- to 24/6; others, 15/- to 17/6; Passion fruit, choice, large, 17/- to 20/-; medium, 15/- to 16/6; Pineapples, 15 count, choice fruit, 17/6 to 21/-.

Dunedin (25/7/23).

Reilly' Central Produce Mart Ltd. report:—Sydney Oranges, plains, 14/- to 15/-; Navels, 19/- to 23/6; Pines realised 18/6 to 24/-; Passions, small, inferior, 12/- to to 14/6; good Passions, 18/- to 22/-; Mandarins, 19/- to 21/-, choice fruit; inferior, badly packed, 13/- to 18/-; Lemons, 25/-.

The "Canadian Miller's" supplies will probably realise 22/6 to 25/- for choice quality Lemons, and Adelaide Navel Oranges, 22/6.

The "Moeraki" we anticipate Navels, 19/- to 22/-; Lemons, 20/- to 22/-; and Poormans, 17/6.

Anticipating heavy consignments, we are specially advertising and endeavouring to create a keener demand for all citrus fruits.

"Climax" Fruit Case.

The "Climax" is the name of a new fruit case invented by Mr. W. M. Green, of Baxter, Vic. The case is designed with a view to providing a better system of ventilation in cool chambers, etc. Small pieces of wood called insulators, about 1in. in diameter, and ⅜in. deep, are placed in suitable places on sides, top and bottom of each case. These are fixed simultaneously with the construction of the case, and it is claimed make the case self-isolating and allow a current of air to pass all round the cases.

When stacked together there are four insulators at each end, viz., two attached to each case, and approximately evenly spaced. On the sides the combination is one at each corner, so that on both sides, top and bottom there is a uniform space of ⅜th of an inch both horizontally and perpendicularly.

Cooksley & Co.
(W. P. COOKSLEY)
Reliable Fruit Agents
22 Years' Experience
TRY THEM!
Fruit Exchange, Brisbane
QUEENSLAND.
Shipping No. 29
Reference: Commercial Banking Co. of Sydney Ltd.

Edward Jacobs & Sons
Covent Garden Market
LONDON, England
Solicits Consignments of Australian Fruit.
Tasmanian Representative:
W. D. Peacock & Co. Ltd
PRINCES WHARF, HOBART
Shipping Number 418.

Growers and Shippers of Australian Fruits
MANDARINS, POORMAN ORANGES, SEVILLES, LEMONS, PINEAPPLES, PASSION FRUIT, LOQUATS
Will find it to their advantage to ship their fruits direct to
Reilly's Central Produce Mart Ltd., Moray Place, Dunedin, N.Z.
We have consistently fought to help the Australian Shippers, and the REDUCTION OF DUTY and BETTER SHIPPING FACILITIES is the result of our efforts.
We have the Most Central and Largest Saleroom in the South Island
A Staff who have a personal interest in each consignment
OUR ADVICE IS AT YOUR SERVICE
Write or Cable - - "REILLY, DUNEDIN." - Satisfaction is assured